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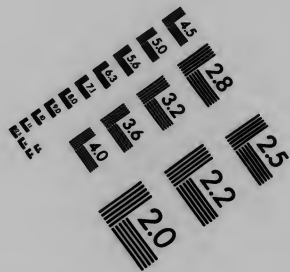
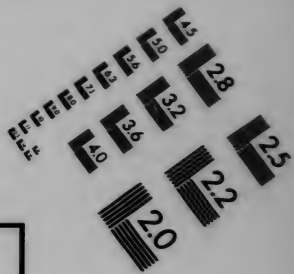
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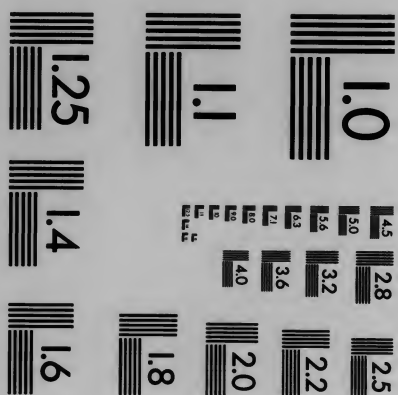


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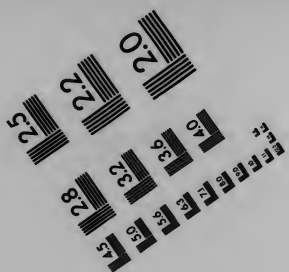
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## GENERAL NOTE.

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IN compiling the Standard Rules the American Railway Association inserts a General Note reading:

"Blanks in the rules may be filled by each Railroad to suit its own organization or requirement."

When such blanks appear in a rule or portion of a rule quoted herein the same should be understood to apply. Throughout the book American Railway Association rulings will be referred to as A. R. A. Ruling ..... (date) .....

Special Rules of a Time-table, General Orders or Bulletins supersede the Book of Rules wherever they conflict. All general orders and bulletins that in any way change, modify or amplify the Book of Rules should be inserted in the special rules of the next time-table issued.

## PREFACE.

---

IN presenting this work to the public, the author does so in the hope that it will answer some of the questions that have been presented to him during the past, the solutions of which were wholly obtained from actual experience. Fifteen years ago there was probably less literature extant upon the subject of railroad operation than upon any other branch of railroading. Such great advances have been made in train operation during this period that the few publications of that day are in a measure obsolete.

This book does not apply to any particular railroad. It is based upon the rulings of the American Railway Association, as late as November, 1915. The text is the author's interpretation and amplification of these rulings and of the Standard Train Rules, Train Orders, Block Signals, and other practice which has been found necessary and advantageous in handling trains under various conditions.

I am indebted to Professor Stuart Daggett, head of the Department of Railway Economics of the University of California for many valuable suggestions. I am also indebted to Monroe C. Kidder, Superintendent of the Permanent Disability Rating Department of the California State Industrial Accident Commission, and to W. E. Boland, Chief Signal Engineer of the Southern Pacific Company, for their valuable assistance in the preparation of this work.

It should be understood that if there is any difference between the author's interpretation of the rules and that of the Management of the Railroad where the reader is employed, the interpretation and rulings of that Railroad should be strictly adhered to.

WILLIAM NICHOLS.

San Francisco,  
April, 1916.



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## TRAIN.

"An engine, or motor, or more than one engine or motor coupled, with or without cars, displaying markers."

If an engine or engine with cars or a motor with or without cars is met without markers the train is not complete.

An inferior train meeting or being passed by a superior train must see the superior train's markers, otherwise it must assume that it has not been met or passed.

If the superior train does not hold a meet or other restricting order with the inferior train, the fact that the inferior train is not displaying markers does not concern the superior train.

If an inferior train fails to clear the time of a superior train it must properly protect itself.

If every engine (or motor) or engine with cars without markers is to be considered a part of a train and an explanation required, it would be necessary for all trains to stop where work or other trains tie up.

## SCHEDULE.

Schedules are the authority for the movement of regular trains. They are classified as first, second, third class, etc.

A schedule is composed of a column of figures showing the number, class and time at stations, also the days that such schedule will be in effect and the territory over which its authority exists. A train running on a schedule, superior to another, has precedence over it.

An engine or more than one engine (or motor) coupled with or without cars displaying markers may be authorized to run under authority of a specified schedule by being given orders or a clearance card, or both or as the rules may require. It is then authorized to run under such authority to the end of its run on the Division or Subdivision.

When it becomes necessary to authorize the use of a schedule from an intermediate station a train order to that effect should be issued. A schedule does not exist at any station until it is due, therefore a train can not run

ahead of its schedule. If a train is not authorized to run on a schedule when it is first due it may be so authorized any time within 12 hours after its time at any station. Whenever a schedule becomes more than 12 hours late at a station it loses its existence at such station and the train (engine and equipment) must thereafter be moved by train order.

#### **SECTION.**

Sections can not be created unless two or more trains are involved, therefore there is no such thing as a section of a *train*—it is a section of a schedule. If there were five sections of No. 1 from A to H, there would be five separate trains. The use of the phrase “only section” is erroneous. If there is but one train, it is the regular train fulfilling its schedule.

#### **EXTRA TRAINS.**

Extra trains, either extra or work extra, have no authority except that which is conferred upon them by train order.

Before an extra train is given authority to run provision must be made by the Dispatcher for it to meet all opposing extra trains authorized to use the same track. There are several ways this can be done, as is shown under train order examples.

Work extras move in both directions on single track within their authorized limits, whereas extras move in one direction except when given round trip orders, in which case their movement must be first to the turning point before the return movement can be made.

#### **DIVISION.**

“That portion of a railroad assigned to the supervision of a ————”. (Generally the Superintendent).

If a Division is not subdivided it is a unit of railroad.

#### **SUBDIVISION.**

“A portion of a Division designated by time-table”.

Each Subdivision must be considered a unit of railroad. If a Division is subdivided into three parts, we then have three railroads, from an operating point of view, within one Division. Conductors, enginemen and others

must recognize in the movement of trains; each subdivision as a separate unit of railroad, regardless of whether the territory worked by a Dispatcher covers one or more than one Subdivision. If a crew runs over two Subdivisions, their train on one Subdivision must be considered a separate train from that of another Subdivision.

#### **MAIN TRACK, DOUBLE TRACK, AND THREE OR MORE TRACKS.**

“A main track is a track extending through yards and between stations, upon which trains are operated by time-table, or train order, or both, or the use of which is governed by block signals.” If only one, it is a single track operated by train order and time-table or both, upon which trains are operated in both directions.

If two tracks, we have double track or two main tracks upon one of which the current of traffic is in one direction, and upon the other in the opposite direction. When both passenger and freight trains move over the same track, such track can not be considered a high speed track, for both slow and high speed trains use it.

If there are three main tracks, one may be used for first class trains only and one for freight trains. The third track must then accommodate both high and slow speed trains.

If there are four tracks, we may then have two tracks for passenger trains, upon one of which passenger trains move in a specified direction, and upon the other in the opposite direction. The other two tracks, may be used by freight trains in the same manner.

In some cases where there are more than two main tracks, two may be used as double track and the others as directed by special instructions. There may be four main tracks used as two double track systems, two tracks for through traffic and two tracks for local or suburban traffic.

Where there are three or more tracks a slow passenger train may be diverted to a freight track to allow a fast passenger train to pass, thus avoiding delay. A fast freight may be diverted to a passenger track to permit it to pass

a slow freight, and vice versa. When trains are handled in this manner, towermen located at or near the crossover line up the switches for such movements on authority of the Dispatcher. Towermen further along the line are authorized to line up switches for train to return to its own track. When it becomes necessary to move a passenger train on a freight track the distance to be moved will depend upon traffic ahead of it, or the length of time it requires the fast passenger train to clear a trailing point crossover in advance of the slow passenger train.

There are but few train orders necessary where there are two or more main tracks. The real art in dispatching trains is on single track where traffic is heavy. It is here that the greatest danger exists.

With a proper block signal system the signals to govern train movements in and out of sidings, trains may be safely moved on single track without train orders and with but few train rules.

The phrases "high" and "slow speed" tracks are now obsolete as some freight trains run as fast as passenger trains.

#### **STATION.**

"A place designated on the time-table by name, at which a train may stop for traffic, enter or leave the main track, or from which fixed signals are operated."

(See explanation under Rule 5).

#### **SIDING.**

A siding is not a "passing track". The phrase "passing track" is unauthorized by the rules and should not be used.

The definition of a siding is a track auxiliary to the main track for meeting or passing trains. All others than those known or designated as a "siding" belong to and are a part of the yard and may be designated as House, Team, or any name best suited to their use.

#### **FIXED SIGNAL.**

Fixed signals are such signals as Slow Boards, Stop Boards, Yard Limits, Switch, Train Order, Block, Interlocking, Semaphore, Disc, Ball or other means for dis-

playing indications that govern the movement of a train. If two position signal it may indicate either STOP or PROCEED. If three position signal it may indicate either STOP, CAUTION or PROCEED.

#### **PILOT.**

A pilot should be either a conductor or engineman who is thoroughly acquainted with the road, however any competent employe may be assigned to that duty. The fact that there is a pilot on a train does not relieve the conductor or engineman of responsibility.

A pilot should ride on the engine and be in a position to direct engineman or furnish any information necessary for the prompt and safe movement of the train. He is equally responsible with the conductor and engineman and must have a copy of current time-table or its supplement and all train orders. Orders should be addressed to Conductor, Engineman and Pilot.

"The responsibility of a pilot is the same as the responsibility of the engineman or conductor, or both, whom he pilots." (See definition of "PILOT"). A. R. A. ruling, Oct. 12, 1887.

#### **UNDER CONTROL.**

(Not Standard).

If the track is seen to be clear for a great distance, a train may run at a high rate of speed and at the same time be under control. If track can be seen to be clear for only a short distance the speed must necessarily be very slow.

If two opposing trains are approaching each other on a curve and each discovers the other's presence at about the same moment, they should be moving at a speed which would enable each to stop within less than half the distance track is seen to be clear.

There is no standard definition for "under control", its meaning being left for each Railroad to define.

In running under control through yard limits the speed should be such that a train can be stopped before striking an engine, car or train that may be occupying or fouling the main track.

### **PROCEED WITH CAUTION.**

Oct. 19, 1908, the American Railway Association stated "The term 'proceed with caution' is employed, and the manner or method is left for each road to determine for itself in accordance with its needs and the varying conditions and practices necessary on different railroads".

### **DETOURING.**

If a train scheduled from "A" to "H" is detoured from "C" to "D" there is nothing to prevent it resuming its schedule "D" to "H" without a train order, provided it has been annulled between "C" and "D" by Form K.

See A. R. A. Ruling April 19, 1909, and April 20, 1914.

### **BULLETIN BOARDS.**

(Not Standard).

Bulletin boards or books may be provided at localities accessible to conductors and enginemen. They should be examined before going out on each trip. A bulletin posted thereon is just as important as a rule and there should be no excuse for not reading and thoroughly understanding every bulletin issued.

In order to show it has been read and is understood each person should sign his name indicating date and time bulletin is read.

Bulletins should be consolidated at least every 30 days, after first eliminating all that are of no value. All permanent instructions relative to train movements should be printed as a special rule in the first time-table issued after the date of such instructions and then removed from the bulletin board or book.

### **STANDARD TIME AND CLOCKS.**

(Rules 1, 2 and 3).

Watches that have been examined and certified to by a designated inspector must be used by conductors, enginemen and others designated. The certificate, in prescribed form, must be renewed and filed with the proper official at intervals as designated by the Company where employed. Watches of conductors, enginemen and others designated must be compared before commencing each day's work with a standard clock designated by time-table as a standard clock. The time when watches are compared

must be registered on a prescribed form. The space provided for registration of time is sometimes provided on the train register.

Conductors and enginemen whose duties prevent them from having access to a standard clock should compare and regulate daily with conductors who have had access thereto. If no conductor or engineman with whom to compare, ask the Dispatcher for the time and request the operator to repeat it to the Dispatcher.

Conductors should also compare time with their enginemen before starting on a run and as soon thereafter as practicable with brakemen and flagmen.

Never compare time unless clock is designated as standard.

### **EXPLANATION OF A TIME-TABLE CHART USED IN CHANGING A TIME-TABLE.**

(See Plate A).

On each Division of a Railroad there is a time-table chart used in changing time of schedules. It is ruled as shown in Plate A. On the left margin are printed the names of stations of the Division, or Subdivision, and the horizontal line under each station is the station line.

The vertical lines beginning at 12:00 midnight, and spaced equal distance apart to the line ending at midnight, on the right, represent each hour of the day as indicated at the top and bottom of the lines. The four spaces between the hour lines represent fifteen minutes each. Full size charts are generally ruled for five minute spaces.

The station lines are ruled proportionately to the distance between stations. The small figures to the left of stations represented by A, B, C, etc., indicate the distances between stations, while those to the right are distances that the respective stations are from one end of the Division, or Subdivision.

In placing the strings on the chart to represent schedules, it is necessary to consider speed, grades and work at stations. Strings must be placed at more of an angle toward the horizontal for slower speed and ascending grades, and toward the vertical for higher speed.

On each time-table chart should appear a string rep-



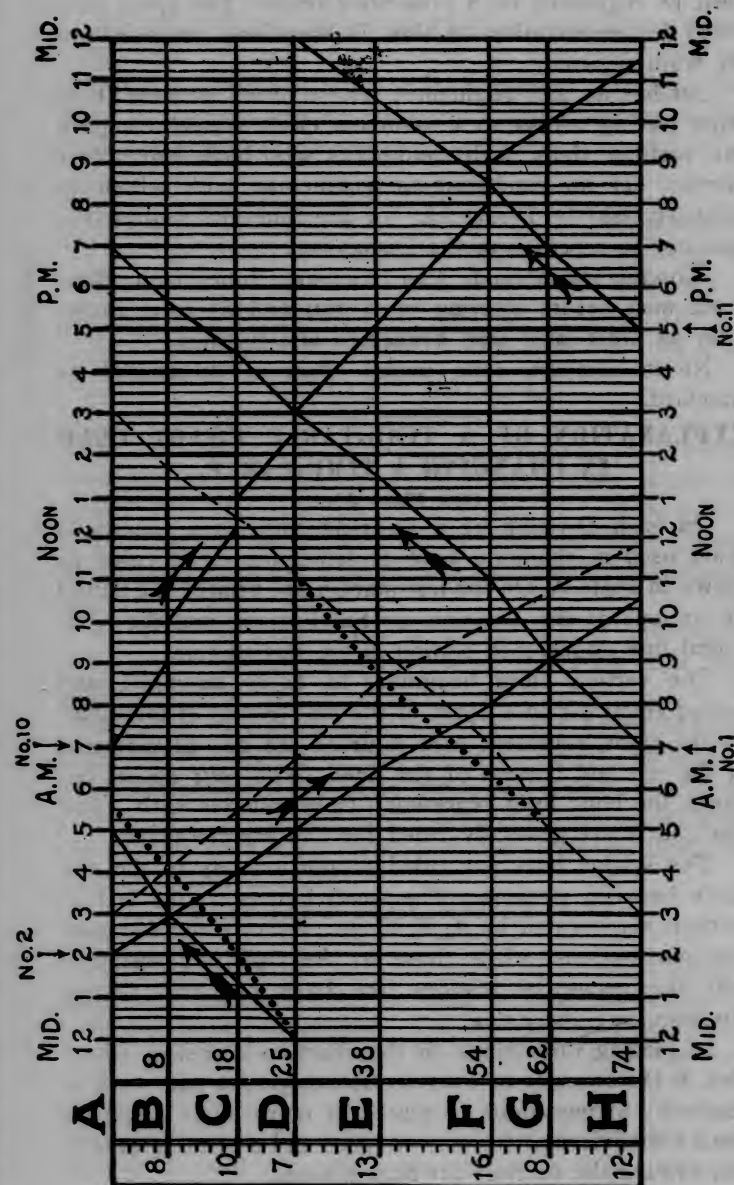


PLATE A

representing each schedule of the current time-table. The strings are regulated on the chart by the use of pins, and all strings running at an angle to the right, commencing at the top of the chart or on Station A line, as shown by the arrows in Plate A, represent schedules from A to H. Therefore, all strings running at an angle from Station H line, at the bottom, represent schedules in the opposite direction, H. to A. Red strings are generally used to represent passenger, and black strings freight schedules. The point where two opposing strings cross indicates the meeting point of the trains of the two opposing schedules as they appear on the time-table in full-faced type.

When two strings of the same direction cross on a station line, it indicates that the train of the faster schedule passes the slower. When a line or string follows the station line horizontally, it indicates dead time at a station.

The string representing the schedule of Old No. 2 due out of A at 2:00 A. M. and into H at 10:30 A. M., as it appears on the chart, is moved over to 3:00 A. M. at A and 11:50 A. M. at H to represent the New as shown by the dash line. The change in this schedule makes it necessary to change the time of the opposing schedule due out of H at 3:00 A. M., between G and D to make a meeting point at E (see dotted line). The string representing a freight schedule from D to A, which is a continuation of the schedule out of H at 5:00 P. M., had to be moved as shown by the dotted line to make a meet with No. 2 at B which made it necessary to show the freight schedule into A at 5:30 instead of 5:00 A. M., otherwise it would have to meet No. 2 at A at 3:00 A. M. which would make its time too fast between D and A. The string (dash line) representing No. 2's new time will be seen to cross the line of an opposing schedule between F and G. This necessitates a change in the opposing schedule leaving H at 7:00 A. M. Its speed will have to be increased between H and F or the leaving time at H made earlier to make a schedule meet at F with No. 2. After the strings are regulated to suit conditions, the time represented by them is transferred to the proposed time-table and printed.

## RECEIPT FOR NEW TIME-TABLE.

(Not Standard).

It is the Dispatcher's duty to know positively that each conductor and engineman and pilot (if any) has a new time-table, or a supplement of current time-table, if there is one, at the time it takes effect, and also to know that all who go out after new takes effect, have a copy.

He should obtain receipt from conductors and enginemen and pilots (if any) of trains that may be on the road at the time the new time-table takes effect.

It is only necessary for Dispatchers to have one signature of each (if a "31" form is used); however, as the operator at one terminal does not know who has signed or not signed for a new time-table at the other end of the territory over which the employe runs, he is obliged to obtain signature unless authorized by the Dispatcher not to do so.

If a conductor or engineman has been absent from duty or running on another Division or Railroad it is his duty to inquire for and obtain a current time-table or supplement thereto before using the main track.

If a time-table is bulletined sufficiently in advance of the time it takes effect and those whose duty requires them to have a copy fail to obtain one, they should be held equally responsible with Dispatcher.

If a crew ties up on the road where they have not access to bulletin boards the responsibility then devolves upon the Dispatcher. Operators and others whose duty it is to obtain signatures receipting for a new time-table should preserve such signatures for future reference.

On some Railroads after a time limit of six days from the time the new time-table takes effect has expired, the Dispatcher is relieved of the responsibility and may annul the order on which receipts are taken. After such time the conductor and engineman are responsible.

In case of a Railroad holding trackage privilege over another Railroad the employes of such road should not start on their run over the joint track without ascertaining whether they hold the current time-table, especially if they are not running regularly over that track.

## TIME-TABLES.

(Rule 4).

"Each time-table, from the moment it takes effect, supercedes the preceding time-table, and its schedules take effect on any Division, or Subdivision, at the leaving time at their initial stations on such Division, or Subdivision. But when a schedule of the preceding time-table corresponds in number, class, day of leaving, direction, and initial and terminal stations with a schedule of the new time-table, a train authorized by the preceding time-table will retain its train orders and assume the schedule of the corresponding number of the new time-table.

Schedules on each Division, or Subdivision, date from their initial stations on such Division or Subdivision.

Not more than one schedule of the same number and day shall be in effect on any Division, or Subdivision."

### PRINCIPAL REASONS FOR CHANGING A TIME-TABLE.

To change the schedule time at stations,  
To add an additional schedule,  
To discontinue a schedule.

### PRINCIPAL OBJECTS OF RULE 4.

To permit the transfer of a schedule of the (old) preceding time-table to the new time-table, changing the time at stations, if desired.

To permit as many trains as possible to continue under schedule authority under the new after the new takes effect, thereby facilitating the movement of trains.

### EXPLANATION OF RULE 4.

When a time-table takes effect it authorizes the schedules indicated thereon on the days designated, subject to the rule, "Daily" meaning the schedule will exist every day, "Daily except Sunday," meaning it will exist every day in the week except Sunday; "Mondays, Wednesdays and Fridays," meaning it will exist only on those days; but in no case can a schedule exist unless there is one in effect and due.

WHEN A SCHEDULE BECOMES DUE AT A STATION IT AUTHORIZES A TRAIN AND CON-



TINUES TO DO SO UNTIL IT BECOMES MORE THAN TWELVE HOURS LATE UNLESS IT IS FULFILLED BEFORE THE EXPIRATION OF THE TWELVE HOURS.

When considering a schedule remember it can have but one date. No. 1 of Monday and No. 1 of Tuesday are two separate and distinct schedules, and are of no relation to each other. A schedule takes its date at its initial station.

When an annulment of a schedule of a specified number and date is issued, such order does not annul the twelve hour existence of the schedule at each station, it only assures those receiving it that no train will be permitted to use the schedule so annulled. Trains receiving this assurance proceed as though such schedule did not appear on the time-table.

A schedule is time existence and cannot be stopped nor interfered with until a new time-table is issued, and such schedule has been omitted or time changed. If any other part of the schedule is changed except time at stations, it then becomes a different schedule from the one of the same number on the Old. When a schedule on the New is exactly the same as on the Old, except that the time at stations may be changed, it is the same schedule, effective on the Old only until the New time-table takes effect, then it is instantly transferred to the New, and what could have been done under the Old may be done under the New, provided the changed conditions as shown thereon are respected.

If a schedule is not due at any station or has become more than twelve hours late or fulfilled, at all stations under the Old at the time the New takes effect, there is no schedule, meaning there is no train authorized under the Old. If there is no train authorized by the schedule of the same NUMBER, CLASS, DAY OF LEAVING, DIRECTION, INITIAL AND TERMINAL STATIONS under the Old there is nothing to assume the schedule of that number of the New, and it is equivalent to no existing schedule under the Old. It is not necessary that schedule of the Old and New be of the same day of arriving.

If there is no schedule on the Old corresponding in the six requirements, or if there is one corresponding but not in effect at time of change (meaning no train authorized) then the schedule of the New time-table does not take effect until its first leaving time at its initial station at or after the new takes effect.

If there is a schedule in effect under the Old at time of change, and no schedule corresponding in the six requirements on the New, such schedule exists only until the New takes effect, and if it is being used, the train fulfilling it can thereafter proceed only as authorized by train orders.

If a schedule of the Old and New are alike in the six requirements, and a train authorized under the Old at time of change, and the time of such schedule of the New has lapsed more than twelve hours at every station at time of change, there would be nothing on the New to assume and it would be the same as if a schedule of that description did not appear on the New, and the train running under the Old, if any, could only proceed as authorized by train orders.

A train finding itself effected by either of the last two cases should be at a point of communication at or before time of change or must be protected in both directions until clear of main track.

If a schedule on both the Old and New are alike in the six requirements, and there is a train authorized under the Old at time of change, the moment the New takes effect such schedule under the New, if due, overdue or not yet due, is or will become effective the same as if there had been no change in time-table.

If a schedule on both the Old and New are alike in the six requirements, and there is a train authorized under the Old at time of change, and the schedule has been partly fulfilled under the Old, the corresponding portion of the New can not be used, but that portion not fulfilled under the Old is in effect under the New until more than twelve hours late on the time of the New.

If a schedule on both the Old and New are alike in the six requirements, and there is a train authorized under the

Old at time of change, but the time of the New is later than on the Old, the train using the schedule under the Old will have to wait, if necessary, to comply with the time of the New to avoid being between stations without any schedule existence. This waiting must invariably be done at a station. However, the train may be late enough under the Old at time of change to overcome the difference in times as shown on the two time-tables, in which case it would not be necessary to wait for the new time.

If the time is earlier on the New (provided it is not more than twelve hours earlier) the train, the moment of change, automatically loses the difference in the times of the Old and New. The train would then be as much late at the time of change as the difference in the time plus the amount it was late under the Old. As no inferior train is permitted to encroach on the time of the New, and the train is late on its schedule, it may be between stations and continue on its run under the New the same as under the Old, respecting superior schedules of the New.

Trains under the Old must consider the time of opposing superior schedules of the New and avoid being caught between stations at time of change on the time of such superior schedules of the New.

If a schedule is annulled over part or the entire length of its territory while the Old time-table is in effect, such annulment applies likewise to the same schedule of the New when the New time-table takes effect.

If a schedule of the Old and New are alike in number, class, day of leaving, initial and terminal stations, but have different intermediate stations, they are not the same schedule and a train may run on the Old until the New takes effect, and thereafter proceed as authorized by train order. In this case, there having been one schedule of that number and date in effect, whether it was fulfilled or not, there could not be another schedule of the same number on the same Division or Subdivision, if subdivided, until the next day it exists following the date of the schedule that has once been in effect under the Old.

If a schedule on the Old is due to leave its initial station at the exact minute the New takes effect, there is no

schedule existing (meaning no train authorized) under the Old at time of change. See A. R. A. ruling dated April 15th, 1912.

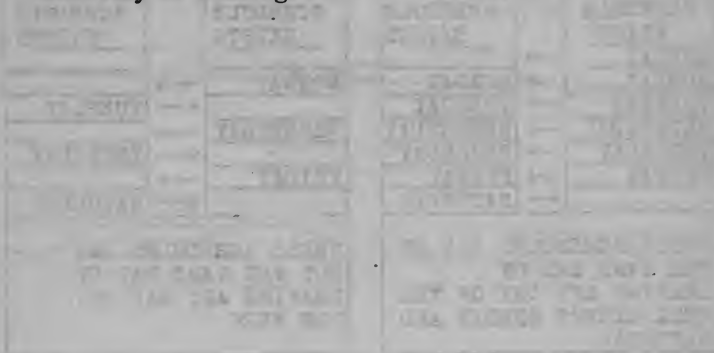
If a new schedule of the New time-table is due at its initial station at the exact minute the New takes effect, there is a schedule existing or train authorized under the New.

When a schedule of the Old and New are the same schedule, all train orders, in effect at time of change, issued for or held by any train, apply under the New, the same as they would have applied under the Old, had there been no change.

If a schedule of the Old and New are alike in Number, Class, Day of Leaving, Initial and Terminal Stations, but the intermediate stations (or route, meaning direction) are not the same, then such schedules are not of the same direction. Direction means that schedules must follow the same line or course.

The only case where the time of a schedule of the New time-table that is earlier at a station than the time of change can be used is when a schedule on the Old time-table is like the New in the six requirements and there is a train authorized on the Old at time of change.

The following examples will explain the meaning of "Same Day of Leaving":



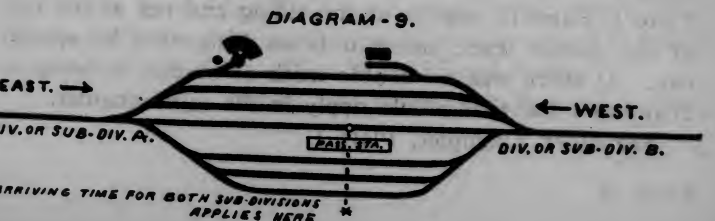
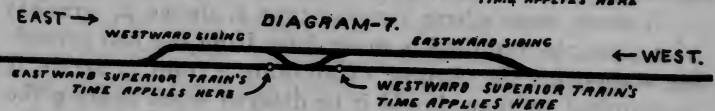
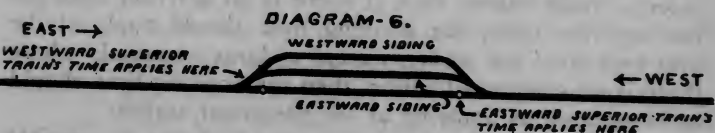
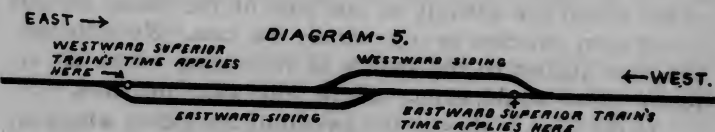
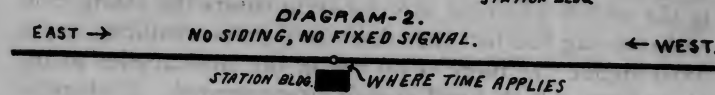
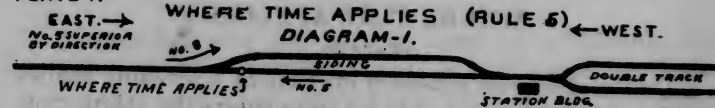
OLD		NEW
DAILY		DAILY
THIS SCHEDULE EXISTS		THIS SCHEDULE EXISTS
SUNDAY	→	SUNDAY
MONDAY	→	MONDAY
TUESDAY	→	TUESDAY
WEDNESDAY	→	WEDNESDAY
THURSDAY	→	THURSDAY
FRIDAY	→	FRIDAY
SATURDAY	→	SATURDAY
THESE SCHEDULES ARE OF THE SAME DAY OF LEAVING ANY DAY OF THE WEEK		

OLD		NEW
DAILY EXCEPT SATURDAY		DAILY EXCEPT SUNDAY
THIS SCHEDULE EXISTS		THIS SCHEDULE EXISTS
SUNDAY	→	MONDAY
MONDAY	→	TUESDAY
TUESDAY	→	WEDNESDAY
WEDNESDAY	→	THURSDAY
THURSDAY	→	FRIDAY
FRIDAY	→	SATURDAY
THESE SCHEDULES ARE OF THE SAME DAY OF LEAVING ANY DAY OF THE WEEK EXCEPT SUNDAY AND SATURDAY		

OLD		NEW
DAILY		DAILY EXCEPT SUNDAY
THIS SCHEDULE EXISTS		THIS SCHEDULE EXISTS
SUNDAY	→	MONDAY
MONDAY	→	TUESDAY
TUESDAY	→	WEDNESDAY
WEDNESDAY	→	THURSDAY
THURSDAY	→	FRIDAY
FRIDAY	→	SATURDAY
THESE SCHEDULES ARE OF THE SAME DAY OF LEAVING ANY DAY OF THE WEEK EXCEPT SUNDAY		

OLD		NEW
MON. WED. FRI.		TUES. THUR. SAT.
THIS SCHEDULE EXISTS		THIS SCHEDULE EXISTS
MONDAY	→	TUESDAY
WEDNESDAY	→	THURSDAY
FRIDAY	→	SATURDAY
THESE SCHEDULES ARE NOT THE SAME DAY OF LEAVING ANY DAY OF THE WEEK		

PLATE I.



## WHERE TIME APPLIES.

(Rule 5).

Unless otherwise indicated the time of a schedule applies to the switch where an inferior train enters the siding, notwithstanding the fact that there is a station building and a fixed signal. If there is no siding the time applies to the place from which fixed signals are operated. If there is neither siding nor fixed signal, it applies to the place where traffic is received or discharged. If there is a siding the superior train has precedence on the main track to the fouling point of the farther switch of the siding, and may leave such point when its time is up. However, in case of a passenger or mail train, the train should not leave the place at which passengers and mail are received or discharged until the time is up.

In some cases the station building and (fixed) train order signal are entirely to one side of the siding instead of between switches as is generally the case. Nevertheless, the time applies to the switch of the siding where an inferior train would enter, unless otherwise indicated.

As the time applies to the switch of the siding where an inferior train enters, then if there is an arriving time for the superior train, the arriving time should apply at the first switch of the siding, except at large terminals where there is no designated siding, then the arriving time should be considered as applying at the passenger station.

If many cases where arriving time is shown at terminal of a schedule, the time is made long from the last preceding station for the purpose of allowing a train to arrive at its terminal on time should it be delayed when nearing the end of the run. This, however, would not authorize the train to arrive in advance of its arriving time in case it did not encounter delay. Should a train arrive in advance of the arriving time in violation of the rule it is clearly responsible for a collision.

The time at a station located at the end of double track where there is also a siding as shown in Diagram 1, Plate 1, Page 17, applies at the siding and not at the end of the double track unless it is so designated by special rule. If there was no double track or station building in Diagram 1 the time would apply in the same manner.

See other Examples, Plate 1.

## FULL-FACED FIGURES.

(Rule 5).

If both arriving and leaving times of a schedule are in full-faced type it indicates that both are meeting times, both are passing times, or one is a meeting time, the other a passing time, or it may also indicate that one or more trains may pass or meet between the times and none at either the arriving or leaving time.

If only one time is shown and it is full-faced it indicates that one or more trains meet or pass at that time.

If two times are shown and only one is full-faced, it is the same as one time full-faced.

Full-faced type applies between schedules of all classes, and such full-faced type when applied to opposing schedules does not indicate a definite meeting point between the trains but only an indication of the farthest point the inferior opposing train may clear the schedule of the superior train.

When a siding extends between two adjoining stations and a schedule shows full-faced type at each end of the siding it indicates that trains are to meet or pass at that siding.

Where there are one or more trains to meet or pass a train between two times, or more than one train to meet a train at any station, attention is called to it, generally, by a dash under the full-faced type. The manner in which attention is called to this is left optional with the Railroad adopting the rule. Some Railroads place the numbers of the trains to meet and pass in small type to one side of the time and in the same column.

Full-faced passing times between trains of the same class denote where trains should pass if on time. The leading train may proceed to the passing station ahead of the following train, but should allow the faster or following train to pass should they overtake them before reaching the passing station to facilitate the movement of the train.

There is nothing to prevent train to be passed from proceeding from the passing point without orders if orders can not be obtained. (See Rules 85 and D-85).

At an initial station full-faced type showing meeting



point should apply only when trains meet at the exact minute. A. R. A. rulings Oct. 6, 1897, and Oct. 18, 1915.

In answer to a question asking if full-faced passing time between schedules of the same class were positive, the A. R. A. replied as follows Oct. 18, 1915: "When the trains are of the same class, the train to be passed may proceed on its own schedule. If train is to be moved by train order, Form B, should be used."

As between trains of the same class, the train to be passed should inquire at the last stop or point of communication preceding the full-faced passing point and if train that is to pass it is late, it may proceed on its run. If the following train does not arrive on its schedule time there is nothing to hold the leading train and it should be delayed but a few minutes at a siding between points of communication. If at a point of communication, confer with the Dispatcher on arrival, the only object being to save delay to the following train.

After the full-faced passing point has been passed if it is desired that the following train pass the leading train, the Dispatcher should use Form B.

The leading train should take the siding if practicable to do so, thus saving delay to the following train as well as to the leading train.

The following train should approach full-faced passing point prepared to stop, but this should not relieve the leading train from protecting properly.

## PLATE 2.

SECOND CLASS		FIRST CLASS			S	FIRST CLASS			SECOND CLASS	
12	10	6	4	2	T	1	3	5	11	13
L	L	L AM 930	L	L	A	A	A	A	A AM 928	A
920 950					B				920 900	
1010	<u>645</u> <u>730</u>	1010			C	650				<u>1010</u>
					D					
	800 830		630	620	E	<u>635</u> <u>610</u>				830 800
				640 650	F		640	650		700 630
					G					
A	A	A	A	A	H	L	L	L	L	L

ODD NUMBERS SUPERIOR BY DIRECTION AS BETWEEN  
TRAINS OF THE SAME CLASS.

### SCHEDULES SHOWING FULL-FACED MEETING AND PASSING POINTS.

(Rule 5).

PLATE 2.

No. 6 is not full-faced at "A" because it does not meet No. 11 at the exact minute as ruled by the A. R. A., Oct. 6, 1897.

As No. 11 is due to leave "B" at the exact minute No. 12 is due to arrive it is only necessary to full-face the leaving time of No. 11 and the arriving time of No. 12.

As No. 13 meets Nos. 6 and 12 at "C" at 10:10, No. 13 is underlined to denote that more than one train is to be met at that time. It is not necessary to underline either Nos. 6 or 12 as each meet but one train.

As No. 1 meets No. 10 at "C" between two times it is necessary to underline the times of No. 10. As No. 1 is

first class and is, therefore, superior to No. 10 it is not necessary to underline its time. The full-faced time of No. 1 at "C" is only for the information of No. 10.

No. 13's arriving time is full-faced at "E" at 8:00 to denote a meeting point with No. 10 at the same time. It is not necessary to full-face No. 13 or No. 10's leaving time even though the times are the same.

No. 1 is underlined at E as it is met by two trains, Nos. 2 and 4, between its two times. Nos. 2 and 4 will search first for schedule times corresponding to their time; not finding them they must then search for a schedule with two times and, if they are due between those times, they then know why their time is shown in full-face type.

As No. 2 meets No. 3 at F at its arriving time 6:40, and No. 5 at its leaving time 6:50, and there are no trains scheduled between the times of No. 2, it is not necessary to underline its time.

As No. 13 meets No. 2 at F and is also passed by Nos. 3 and 5 between its times, it is necessary to underline the time of No. 13.

Nos. 2, 3 and 5 being superior by class to No. 13 the time of No. 13 does not concern them.

#### **SIGNS BEFORE FIGURES OF A SCHEDULE.**

(Rule 6).

The "S" sign indicates a regular stop and is generally placed to the left of the time at a station. When so placed a train running on the schedule must stop regardless whether there are passengers or freight to discharge or receive.

The "F" sign indicates that the train will stop on signal to receive or discharge passengers or freight. If there are passengers to discharge the conductor signals the engineman by three short sounds of the communicating signal after passing last station preceding the one at which it is to stop. Engineman answers with three short sounds of the steam whistle.

If there are passengers or freight at a station to be received the agent or employe in charge should display a combination green and white flag by day and by night two lights, one green and one white. The lights should be

placed about twenty inches apart in line at right angles to the track. If placed close together the green light can not be seen until the train is close to the signal, owing to the white light being the stronger.

A train not authorized to stop by the sign "F" should disregard the combination green and white signal as such signal affects only trains running on a schedule designated by such sign. If it is desired to stop a train that otherwise would not stop, a red signal should be used, preferably the train order signal if there is one.

When sections are run each section should comply with the signs "S" and "F" unless otherwise directed, or the character of the train is such that there would be nothing requiring it to stop, as in case of an official, stock or other fast train that is being run as a section of the schedule only to expedite its movement. In flagging, a flagman must not depend upon the train stopping owing to the sign "S".

When by special rule a train is authorized to stop under certain special conditions, a red signal should be used.

#### **SIGNAL APPLIANCES AND THEIR DISPLAY.**

(Rules 7, 8 and 9).

Employees who are required to give signals must have the necessary appliances ready for immediate use; flags of the prescribed color for day signaling and lights of the prescribed color for night signaling. During stormy or foggy weather in the day time in addition to the day signals, which must be displayed between sunrise and sunset, night signals should be used. Night signals must be displayed from sunset to sunrise.

#### **COLOR SIGNALS.**

(Rule 10).

*Red*, a signal to stop should not be called a danger signal. Stop signals are required to be given at a sufficient distance to allow a train to stop before an obstruction is reached. If this is done and signal properly obeyed there is no danger. *Purple* as a night indication on dwarf signals indicate stop the same as Red.

*Green* is generally used to indicate proceed and *Yellow* to indicate caution. *Green and White* flag stop, *Blue* to



protect workmen as per Rule 26. The colors to be used to indicate proceed and proceed with caution is left optional with each Railroad.

### **FUSEE.**

(Rule 11).

"A train finding a fusee burning on or near its track must stop and extinguish the fusee, and then proceed with caution, prepared to stop short of train or obstruction."

Care should be taken in placing fusees and avoid, if possible, displaying them between the rails. If a fusee is found between the rails train should be stopped before passing over it as leaky oil cars or gas therefrom may ignite.

A fusee should be respected regardless of its position except where conditions are such that it is beyond a doubt intended for another track.

If placed between the nearest rail of adjoining track and track being used it should be considered as applying to track used. If beyond the first rail of an adjoining track it should be considered as applying to the adjoining track.

In throwing off fusees from moving trains care should be taken to place them, if possible, on the engineman's side of the specific track for which they are intended.

They should never be broken to reduce the time, nor two coupled to increase the time.

Fusees should not be placed on the rear platform of a caboose, but thrown off as required. Keep fusees in a dry place and where they can not shift around loose and become ignited.

When running in dense fog it is often necessary to use a fusee, especially if train reduces speed.

Fusees are excellent signals during snow or sand storms and can be used by rotaries and snow bucking outfits when no other stop signals can be seen.

Fusees should not be placed near buildings nor on bridges or other structures where a fire may be started.

If the rules of the Railroad where the reader is employed prohibit a train passing a fusee until it is burned out, this rule should be complied with.

### **HAND, FLAG AND LAMP SIGNALS.**

(Rules 12 and 13).

The signals provided for in Rule 12 should be strictly complied with.

In switching, if a signal is necessary that is not authorized under Rule 12, then signals necessary to convey the information should be used. Much depends on the proper interpretation of a signal. An engineman acts as nearly as possible to the interpretation he places on the signal. If the signals provided in Rule 12 are given correctly the responsibility then rests with the employe for whom the signals were intended.

"Any object waved violently by any one on or near the track is a signal to stop".

### **ENGINE WHISTLE SIGNALS.**

(Rules 14 and D 14).

Enginemen should be careful to sound the whistle properly as required by the Rules. Private whistle signals should not be used. Short sounds should not be given to call in a flag, nor long sounds to call for a signal.

Flagman should not recognize short sounds for a call in, but remain out until long sounds are given.

Whistle Signal 14 (m) should not be given after stop is made for railroad crossings at grade, but should be given approaching such crossings. This signal should be given at all railroad crossings, whether interlocked or not.

The Standard Rules make no provision for a signal to send flagman ahead, therefore some Railroads use three short and one long (ooo—) sounds to signal flagman ahead. This signal is necessary, especially where single track is protected by automatic block signals.

Enginemen should avoid whistling near passenger trains, especially at night, and also near passenger stations.

On double track when a train displaying signals passes another of the same direction also displaying signals it is only necessary for the train passing to give Signal D-14 (k). See A. R. A. Ruling Oct. 17, 1910.

When Signal 14 (K) is given, if it is not answered, the train displaying signals must stop and ascertain the cause.

The 1915 revision of the Standard Rules provides for the signal, one short and one long sounds for the inspection of the train line for leaks.

### **TORPEDOES.**

(Rule 15).

"The explosion of two torpedoes is a signal to reduce speed and look out for a train ahead or obstruction. The explosion of one torpedo will indicate the same as two, but the use of two is required."

From the above 1915 revised standard rule it will be seen that the explosion of one torpedo does not indicate stop as heretofore. However, it must be so considered if operating under the old rule.

Care should be used in the placing of torpedoes not to place them near buildings, platforms, or other places, where flying pieces may injure persons near the track or where the explosion would occur near passenger trains.

They should be securely fastened and arranged so they will not slip or skid, and when not in use be kept in dry, safe place.

### **COMMUNICATING SIGNALS.**

(Rule 16).

In giving signals with air signal apparatus sufficient time should be allowed between each opening of the air valve to prevent the sounds from running together.

#### **RULE 16 (d).**

When train is running three short sounds means stop at the next passenger station after the signal is given, whether it is a flag stop or not.

#### **RULE 16 (e).**

When train is standing five sounds of the air signal indicates to call in flagman from either direction. If there is a flagman out in both directions conductor should notify engineman which flagman he wished called in, unless train is to proceed, in which case the flagman preceding or located ahead of the train may be picked up when overtaken.

The 1915 revision of the Standard Rules provides for a signal to increase train heat when running, six short sounds; also one when train is running to look back for hand signal, one long sound.

### **DISPLAY OF HEADLIGHT.**

(Rules 17, D-17 and 18).

The headlight is a stop signal when displayed by a train on a siding and should not be concealed until train is clear of the main track and stopped. Opposing trains must be flagged as per Rule 99 regardless of the headlight. If concealed while train is moving on a siding there is liability of striking cars or other obstruction.

Should an opposing train find a headlight displayed by a train which is required to clear the main track it should stop at once and, if track ahead is clear, proceed cautiously to point of obstruction, if any.

Enginemen and trainmen should note the position of the switch ahead before covering or extinguishing headlight when standing at the end of double track or at a junction headed toward the main route.

If a train backs in at the end of double track or at a junction, it is responsible for the position of the switch.

A headlight partly covered should be considered the same as if uncovered.

If a train of a diverging route is standing at a junction with double track and the connection is such that the engine will be headed in same direction as the current of traffic on the first main track with which it connects, it is not necessary to cover the headlight. If the diverging route connects in such a manner that trains will be headed in the opposite direction to trains moving with the current of traffic on the first main track with which it connects or crosses, the headlight should be covered.

In the Standard Rule the following note to Rule 17 appears: "Railroads which do not find it necessary to conceal headlight, as required in Rule 17, may omit that provision from the rule".

Trains are permitted to pass headlights in yards when displayed by yard engines, without stopping.

Road engines or trains standing in terminal yards should not display headlight unless they obstruct the main track. Trains entering terminal yards should be confronted with as few headlights as possible.

When clear of main track to allow a train moving in the same direction to pass it is not necessary to cover the headlight.

Rule D-17 applies the same as Rule 17 with the exception of meeting trains on single track.

In case of failure of the headlight, a white lantern in place of a headlight should be used as a signal to other trains, although it is a very poor substitute.

The failure of a headlight should be reported to Dispatcher at once. Dispatcher should, if possible, notify other trains.

When two or more engines are coupled at the head of a train or other engines coupled in the train, all headlights should be covered or extinguished except that of the leading engine.

"When an engine is running backward a white light must be displayed at night on the rear of the tender."

Yard engines will display the headlight to the front and rear by night. When not provided with a headlight at the rear a white light must be displayed.

#### **MARKERS.**

(Rules 19 and D-19).

The proper display of flags or lamps as markers is important, therefore it is necessary to watch them closely at night to see if the lights are burning properly.

When flags are used during the day and it becomes necessary to change the flags for lamps at night or before passing through tunnels and snow-sheds, both flags should not be removed before a lamp is placed in position.

Markers should not be changed from red to green (or yellow if used) until it is known that both head and rear of train is entirely clear of main track. The fact that the rear car has passed over the switch is not sufficient. Wait until clear.

If a train occupies a diverging route which parallels the main route, the rule applies to one main track the same as to the other, or the same as if paralleled by a foreign line.

"If the helper is running as an extra train, then both the train which it is assisting, as well as the helper, must display markers as well as class signals. If, however, the helper is without train orders and couples in as a part of the train which it is helping, the markers must be displayed upon the helper and not upon the caboose of the train which it is assisting. Markers displayed upon the caboose and upon the helper would indicate that they were two independent trains closed up." (A. R. A. Ruling, Oct. 19, 1908).

From this ruling we assume it is to apply only when helper couples in behind the caboose or last car of train. If helper is running as an extra and is coupled in the train between the engine and caboose, then its orders should be annulled and markers removed.

When a train turns out against the current of traffic, a green light must be displayed to the rear toward the inside or next to the track used in moving with the current of traffic, and a red light to the rear on the outside.

If two red lights are displayed as markers by a train turned out against the current of traffic it would stop or delay any following train moving with the current which may desire to pass.

If a train moving against the current of traffic encounters two red marker lights ahead, it indicates a train on other track moving with the current of traffic.

When lamps are used as day markers it is not necessary to turn them when clear.

When a conductor of a superior train registers his arrival on a train register it is not then necessary for the inferior train to see its markers.

In the Standard Rules the following note to Rule 19 appears: 'Where railroads desire to discontinue the use of markers by day on passenger trains, it is permissible to do so.'

#### **DISPLAY OF MARKERS ON THREE OR MORE TRACKS.**

(Rule F-273).

Example (A)

Track 4	—————>	Frnt. Track
Track 3	—————<	" "
Track 2	—————<	Psgr. Track
Track 1	—————>	" "

Under Example (A) a train by night running with the current of traffic on Nos. 1 and 2 Tracks will display two red lights to the rear.

A train by night running with the current of traffic on No. 3 Track will display a green (or yellow) light to the rear on the side next to No. 2 Track in the direction of the current of traffic, and a red light on the opposite side.

A train by night running with the current of traffic on No. 4 Track will display a green (or yellow) light to the rear on the side next to No. 1 Track in the direction of the current of traffic and a red light on the opposite side.

Example (B)

Track 1	←	Psgr. Track
Track 2	←	Frt. Track
Track 3	→	" "
Track 4	→	Psgr. Track

Under Example (B) a train by night running with the current of traffic on Nos. 1 or 4 Tracks will display two red lights to the rear.

A train by night running with the current of traffic on No. 2 Track will display a green (or yellow) light to the rear on the side next to No. 1 Track in the direction of the current of traffic, and a red light on the opposite side.

A train by night running with the current of traffic on No. 3 Track will display a green (or yellow) light to the rear on the side next to No. 4 Track in the direction of the current of traffic, and a red light on the opposite side.

Under either of these examples a train by night using any track against the current of traffic will display two green (or yellow) lights at the rear, one on either side, with a red light on the platform or cupola.

A train by night on a siding will display two green (or yellow) lights to the rear."

#### DISPLAYING GREEN SIGNALS.

(Rule 20).

It is important that both engineman and conductor should inspect and know personally that proper signals are displayed before leaving. They should be watched closely and inspected at intervals, especially at night, to ascertain

if burning. While the display of one signal has the same meaning as two, two must be displayed. The object of requiring day signals in addition to night signals at night is due to the possibility of failure to display the green flags at the proper time in the morning when the green lights are dimmed by daylight.

The whistle signal 14 (k) has been eliminated on some Railroads.

#### DISPLAYING WHITE SIGNALS.

(Rules 21 and D-21).

With a proper train indicator the use of white flags and lights to denote an extra can be eliminated. However, until such time it is just as important to have both white flags displayed and, in addition two white lights by night, as it is to display green signals for a following section.

The reason for the display of white signals is to prevent an extra being taken for a regular train when running ahead of the regular train on its time. The A. R. A. authorizes the omission of Rule 21 on two or more tracks when conditions make it desirable.

#### DISPLAY OF SIGNALS WHEN TWO OR MORE ENGINES ARE COUPLED.

(Rule 22).

"When two or more engines are coupled, each engine shall display the signals as prescribed by Rules 20 and 21."

The object of this no doubt is to prevent the possibility of failure to transfer signals from the engine that may be cut out to the engine that remains in the train.

It is presumed that Rule 22 applies only to two or more engines coupled on the head end of a train, as it is frequently necessary on mountain roads to couple two or more engines in a train or at the rear of a train.

#### IDENTIFICATION OF TRAINS.

(Not Standard).

The Standard Rules do not treat on the identification of trains, but leaves it to each Railroad to cover.

In the early days of railroading, and perhaps it still exists in some places, the identification was verbal. When trains met one conductor would announce to the other the number of his train, and the other conductor would do



likewise. When meeting under train orders the order would state the engine number or conductor's name.

Later came the identification check. Conductors were required to fill out a blank form stating their train number and whether or not they were displaying signals, and exchange with one another. Later still the practice of identifying trains by observation check was used; for instance, if two superior schedules were due two trains had to be met without signals regardless of the number of sections displaying signals.

In case trains were displaying signals and several overdue, it made no difference how mixed the sections of the several schedules were, if there were three schedules overdue, three trains without signals had to go; then the three schedules had been fulfilled. There were, however, possible chances of mistakes being made under this system if not thoroughly understood. For example:

FIRST CLASS		S	FIRST CLASS	
	2		1	3
	L PM	A	A PM	A PM
	300	A	430	450
	320	B	410	430
	340	C	340	400
	350	D	330	350
	410	E	300	320
	A PM		L PM	L PM
NON TELEGRAPH OFFICE				
ODD NUMBERS SUPERIOR				

Order No. 1: Second 1 Eng 100 meet No. 2  
Eng 99 at "D".

No. 2 makes "C" for First 1, clearing its time. After No. 2 leaves "B", First 1 meets with delay. No. 2 remains at "C" for First 1 and No. 3. There are two sections of No. 3 on time not known to No. 2 and they pass both First and Second 1 owing to delay. At or after 4:00 P. M. a train passes "C" with green signals. No. 2 checks them as First 1. Later a train passes without signals and is checked as No. 3. Having met First 1 and No. 3 as they

suppose, No. 2 proceeds to "D" to meet Second 1 as per Order No. 1 and collides with First 1 between "C" and "D". The first train with green signals was First 3 and the second train was Second 3 without signals, therefore No. 2 should have remained at "C" for First 1.

The first train by with green signals could be First 1 and the second, without signals, No. 3, in which case No. 2 could proceed to "D" on the meet with Second 1. Therefore, it is the duty of No. 2 just as soon as No. 3's schedule becomes due to flag the first train and ascertain what it is, and then the identity of the second train is known.

We may say the Dispatcher should prevent this condition, but sometimes he can not. If conductors and engine-men thoroughly understand the movement of trains and observation checking, nothing can occur.

Train indicators eliminate this possibility—engine numbers in orders will not do so. The best and latest system of identification is the train indicator (not engine indicator) consisting of white figures with a black background placed in a casing on the front of an engine and in front and rear of a caboose cupola, illuminated at night. This identification should be shown on rear of passenger trains. Provision should be made to indicate last section. When this system becomes Standard, the display of green signals for sections and white signals for extras can be discontinued.

### TRAIN INDICATORS.

(Not Standard).

The improper display of train indicators should be considered the same as the improper display of a signal.

The proper indicator should be shown on both engine and caboose (when so equipped) as soon as it is possible to do so after train is authorized. The indicator should not be removed unless the identity of the train is changed or the train reaches the end of its run. When practicable it is well that indicators remain in position on reaching the end of run for a reasonable time, if there is liability of causing delay to a train leaving in the opposite direction which, after having left the registering office, must make identification in the yard. When there is no indication of an opposing train ready to leave the indicator should be removed promptly on arrival.



Train indicators are additional safeguards but do not relieve train and enginemen from noting the engine number when such information is given.

Indicators on all engines when helpers are coupled on the head of train, if running extra, should correspond with the engine designated in the order to run extra.

Although provision is made in some Indicators for an "only" section, it is impossible to have one. There must be two or more trains running on the same schedule before sections exist. If only one train is fulfilling a schedule, it is not an only section, but a regular train.

### **BLUE SIGNALS.**

(Rule 26).

The proper placing of blue signals is important.

Care should be taken to place blue signals on engines when they are coupled to a train that is being repaired.

Signal should in this case be placed directly in front of the engineman. Before removing a blue signal from a train to allow engine to couple on man in charge should positively know that all his men are in safe positions. Engineman should never apply air brake when train is protected by a blue signal as it may catch a workman who is changing a brake shoe.

When you assume that you will not move the train or cars when coupling engine on, owing to brakes being set on the train, you are inviting trouble.

When icing and watering trains with men on top or on ladders, the train should be fully protected by blue signals.

When cars are under repairs they must be protected by blue signals at one or both ends. When so protected the signals must not be obscured by placing other cars or engines in front of them without first notifying the workmen, neither should they be coupled to nor moved until blue signal is removed by car repairers who placed the signal.

### **ABSENCE OF OR AN IMPERFECTLY DISPLAYED SIGNAL.**

(Rule 27).

"A signal imperfectly displayed, or the absence of a signal at a place where signal is usually shown, must be regarded as the most restrictive indication that can be

given by that signal, and the fact reported to the ———.

Conductors and enginemen using a switch where the switch light is imperfectly displayed, or absent, must also, if possible, correct or replace the light".

If a stop signal is imperfectly displayed or absent from the place where it is usually shown, train must stop. If caution is the most restrictive signal that can be given, and signal is imperfectly displayed or absent from the place where it is usually shown, train must proceed with caution. If a signal that may indicate either stop, caution or proceed is imperfectly displayed or absent from place where it is usually shown, it must be considered a stop signal, except that the removal of a semaphore blade of an automatic block signal indicates that the signal is out of commission.

### **FLAG STOPS.**

(Rule 28).

A combination green and white flag by day and a green and white light by night will be used to stop a train only at the flag stations indicated on its schedule. The flag should be placed stationary on the engineman's side of the track where it can be plainly seen and should not be waved across the track. If the signal is waved or swung across the track it would stop a limited or through train in case they should be ahead of the train to be flagged—the very object for which the green and white signal was intended to avoid. If by special rule a train is instructed to stop under special conditions, a red signal should be used as the green and white signal only applies when the letter "f" appears in the schedule opposite the time.

### **COMMUNICATION OF SIGNAL INDICATIONS BETWEEN ENGINEMEN AND FIREMEN.**

(Rule 34).

"The engineman and fireman must, when practicable, communicate to each other by its name the indication of all signals effecting the movement of their train."

The communication of the indication of signals between enginemen and firemen is so important that there should be but few cases where it is not practicable. It should be done in every case, especially on oil burning engines.

When an engineman is approaching a signal that can not be seen a sufficient distance to enable him to stop before passing it, owing to obscure view on a curve, the fireman should, if necessary observe its position and inform the engineman as early as possible. If approach is badly obscured the train should reduce speed sufficient to stop at the proper place should the signal indicate stop. Enginemen should not approach a signal at high speed expecting to obtain a proceed indication at the last minute.

### SIGNALS USED BY FLAGMEN.

(Rule 35).

DAY SIGNALS—A red flag, torpedoes and fuses.

NIGHT SIGNALS—A red light, a white light, torpedoes and fuses.

### TRACK ORDERS.

Instructions relative to condition of track, bridges, etc., issued on either the 19 or 31 form, are train orders and should be handled accordingly. Such train orders should be placed on either side of the section to be protected, and the annulment of the order is evidence that repairs have been made. It is best to specify a speed limit in miles per hour or preferably the number of minutes which must be used in passing over the specified section. Dispatchers should make track orders clear and concise, giving exact locations and conditions, and define clearly the points between which the order applies in a manner that may be easily determined, insisting on Roadmasters and others furnishing the required information. Attention to same should frequently be called to Chief Dispatcher with view to obtaining authority to remove the restriction as soon as possible.

Enginemen and trainmen should comply strictly with the order regardless of loss of time. Knowing that repairs have been made does not excuse violation.

On two or more tracks where trains are authorized to run extra without orders, and a particular track is effected, trains on other tracks should be given the order for their use should they desire to use the track so effected.

Track orders should be consolidated from time to time to keep the number down to a minimum. The speed specified applies to the entire length of train and not to the engine alone.

### PLATE 3.

AS BETWEEN TRAINS OF SAME CLASS, WESTWARD TRAINS ARE SUPERIOR BY DIRECTION.

	SUPERIORITY		CLASS	DIRECTION	RIGHT	
	EASTWARD →	← WESTWARD				
EXAMPLE 1.	NO. 244 - 2 <sup>2</sup> CLASS → A B C D E F G H	← NO. 1 - 1 <sup>ST</sup> CLASS A B C D E F G H				
EXAMPLE 2.	NO. 4 - 1 <sup>ST</sup> CLASS → A B C D E F G H	← NO. 3 - 1 <sup>ST</sup> CLASS A B C D E F G H				
EXAMPLE 3.	NO. 6 - 1 <sup>ST</sup> CLASS → A B C D E F G H	← NO. 5 - 1 <sup>ST</sup> CLASS A B C D E F G H				
EXAMPLE 4.	NO. 244 - 2 <sup>2</sup> CLASS → A B C D E F G H	← NO. 1 - 1 <sup>ST</sup> CLASS A B C D E F G H				
EXAMPLE 5.	EXTRA 26 EAST. → A B C D E F G H	← EXTRA 27 WEST. A B C D E F G H				

NO. 5 MEET NO. 6 AT D.

NO. 1 WAIT AT D UNTIL 1.P.M FOR NO. 244.

ENG 26 RUN EXTRA A TO H AND MEET  
EXTRA 27 WEST AT D.

## SUPERIORITY OF TRAINS.

(Rules 71-72-73).

A superior train is one having precedence over another.

The word "right" is perhaps the most abused word in the Standard Rules. With some it is used for expressing all kinds of superiority. It should be understood as meaning but one thing—superiority conferred by train order. If no train order exists there is no superiority by "right". The phrases "time card right", "time-table right", "right by direction" should never be used as they indicate ignorance of the rules.

Superiority is conferred in three ways—Right, Class and Direction. When you say that a train is superior to another train it may mean by either train order, class or direction. The kind of superiority must be determined.

In a general sense the word "superiority" should be used instead of "right" as is generally used. Superiority by direction under normal conditions is conferred only by time-table, and not by train order, and applies only to opposing trains of the same class on single track.

Superiority by class is conferred by classifying the schedules of the time-table.

As a train order supersedes a time-table movement in so far as it conflicts therewith, it necessarily is superior to class and direction. The direction in which trains are made superior as between trains of the same class must be designated in the time-table. On roads of two or more tracks, where it is not necessary to designate the direction in which trains are superior by direction, provision should be made in the rules, for the direction in which trains shall be superior when a section of double track is to be used as single track.

First class schedules are superior to second class schedules. Second class schedules are superior to third class schedules, and so on. As extra trains are created by train order they have no superiority by class or direction and are inferior to all trains running under schedule authority.

In Plate 3, Example 1, No. 1 is superior to No. 244 by class and No. 244 must keep clear of No. 1.

In Example 2, No. 3 is superior by direction to No. 4 of the same class and No. 4 must keep clear of No. 3.

In Example 3, No. 5 is superior by direction to No. 6 but the order making a meet between Nos. 5 and 6 at D makes No. 6 superior by right over No. 5 from the point where it receives the order to the meeting point D, and No. 5 remains superior by direction H to D, their superiority by direction having been temporarily suspended west of D by the order to meet at D. In making this meet it is necessary to make the order effective to No. 5 before completing it to No. 6. If it is desired to change the meet to C or any station between D and A it is first necessary to place the order for No. 6 and make it effective before completing it to No. 5 as No. 6 is superior by right to No. 5 west of D. If changed to E instead of D the order must be sent to No. 5 and made effective before it is completed to No. 6 as No. 5 is superior by direction to No. 6 between H and D.

In Example 4, No. 1 is superior by class to No. 244. When the wait order is issued No. 244 becomes superior by right over No. 1 between the point where the order is received and D until 1 P. M. This wait order temporarily suspends No. 1's superiority by class west of D until 1 P. M. At 1 P. M. the order is fulfilled, and No. 1's superiority by class then governs west of D. If it becomes necessary to reduce the time of the wait order, the order must first be annulled to No. 244 before the annulling order can be completed to No. 1.

In Example 5 we first give Engine 27 right by train order to run H to A. Before an order giving Engine 26 right to run A to H is completed to Engine 26 provision must be made for the opposing extras to meet as shown by the order. Extra 26 East is then superior by right to Extra 27 West A to D and Extra 27 West is superior by right to Extra 26 East only as far as D. If necessary to change the meeting point the same procedure must apply as in Example 3.

In dispatching trains Dispatcher must always consider an extra holding authority to run as superior to an opposing extra which he desires to create.



## EXISTENCE OF TIME-TABLE SCHEDULES.

(Rule 82).

Time-table schedules unless fulfilled are in effect for twelve hours after their time at each station; therefore if a schedule has two times at a station the arriving time is in effect at such station until twelve hours after the arriving time, and the leaving time is in effect until twelve hours after the leaving time.

Orders addressed to such schedule number but not yet delivered are in effect until the schedule becomes more than twelve hours late on its leaving time.

A train running under the authority of a schedule may become more than twelve hours late on the arriving time and flag in, but this does not effect the schedule's leaving time. The regular train having lost both right and schedule can proceed only under train order. The same train (equipment) or any other engine and equipment may be authorized to run on the schedule by the Dispatcher issuing a train order to that effect, provided the train can move within the twelve hour limit based on the leaving time.

A train must not leave a preceding station more than twelve hours late expecting to make the next station within its twelve hour limit, even though the station at which such train becomes more than twelve hours late is not a train order office, or the office has been closed. When a train is "dead" it is nothing until authorized to move on the same or another schedule by train order or created an extra.

The schedule is authority for the movement of a train and the train running under its authority is the regular train, therefore they are not the same.

Oct. 19, 1908, the American Railway Association ruled "Should a train at any point fail to make its schedule within the 12 hour limit it can not thereafter resume its schedule without train order, even though it overtakes it."

## AHEAD OF TIME.

(Not Standard).

The practice of authorizing trains by train orders to run in advance of their schedule was discontinued several years ago owing to numerous complications. Such orders were never authorized by the Standard Rules but were

generally used. The phrase "ahead of time" is a misnomer as it is impossible for such condition to exist. There is not an authorized regular train at any station until a schedule exists and the schedule does not exist until the time specified at the station, therefore, it would be impossible for a regular train to run ahead of its time.

## TRAIN REGISTER.

"A book or form which may be used at designated stations for registering signals displayed, the time of arrival and departure of trains and such other information as may be prescribed."

A register book or form must provide for the kind of signals displayed, if any, and where they are displayed to, if displayed to a station intermediate between registering stations (see last paragraph of Standard Rule 96).

The checking of a train on one register governs only to the next register station, where a check must again be made unless otherwise provided. The station to which signals were displayed must be noted, and if signals were taken down by an opposing superior train at a point between register stations, the inferior train must on arrival at such station be governed the same as if signals were taken down at a register station unless the last section has arrived or authority to proceed is received. If the last section is met before reaching the next register, this does not relieve the inferior train of responsibility of checking it.

When a register shows sections and a train has an order to meet a section, all sections should be checked to see if they appear in numerical order. If not, a mistake has been made.

If an order to meet, for example, the third section and the second section should by mistake register third, if the train checking did not examine the register and know that the sections appear in sequence—first, second, third—it might result in a collision with the third section.

Some Railroads authorize trains by special rule to leave a registering ticket with the operator who must enter the contents on the register. If ticket is not filled out properly, or conductor fails to leave one, operator should



confer with Dispatcher and obtain necessary information to correctly register the train, and then make a written report to the proper authority. When such authority is given by special rule it relieves the conductor and engineer of checking against superior trains except those that terminate or originate at such station. This does not, however, relieve the train which has taken down signals from notifying inferior trains or trains of the same class that are met before reaching the next register station, which are by special rule permitted to register by ticket at the register station where signals were taken down. When such special rule exists it places the responsibility with the operator and conductor and engineer of the train taking down signals who must consider such station equivalent to a non-register station for opposing trains authorized to register by ticket, and train that took down signals must stop and notify such opposing inferior trains or trains of same class, if met beyond the register station, that signals were taken down at the station where opposing train is authorized to register by ticket. Operator must also notify inferior opposing trains authorized to register by ticket at his station or if his register shows that signals were taken down by any opposing superior train between the last preceding register station and his station, until the last section arrives or schedule becomes more than 12 hours late or is annulled, or following section is annulled into his station, in which case there can be no more.

When trains have been made superior by train order it is the Dispatcher's duty to designate the necessary sections in order to protect such conditions. However, it is good practice to check registers at register stations within the territory of a right order (Form C) against signals displayed by train given right.

If a train is authorized by train order to register by leaving a registering ticket it must obtain a train order check of trains from the Dispatcher, and in such check Dispatcher is held responsible to make an exception of sections that have not arrived.

The following form may be used but is not authorized by the Standard Rules:

"Regular trains due \_\_\_\_\_  
before \_\_\_\_\_ have arrived  
and left except \_\_\_\_\_."

The above form should be addressed only to those authorized to register by registering ticket and such check should be assumed to include the train addressed. It is not good practice to add a train order check of register to orders that are addressed to other trains. When such check is addressed only to train that is to use it, it should not be necessary to state that they will register by ticket.

When a check of trains is received by train order such check should apply only to the train as addressed and not to another train that may be run by the same crew.

When checking a register see if any other train has fulfilled the same schedule you are authorized to use.

Regular trains should register in on the date they are due to arrive even though they do not arrive until the next day. In this case the date should follow the time. The date following the time is not compulsory, but good practice.

Extras should register in on the date they arrive.

#### **CHECKING REGISTER BEFORE LEAVING INITIAL STATION, JUNCTION OR PASSING FROM DOUBLE TO SINGLE TRACK.**

(Rules 83 and D-83).

"A train must not leave its initial station on any Division (or Subdivision), or a junction, or pass from double to single track until all trains due, which are superior, or of the same class, have arrived and left. Stations at which train registers are located may be designated on the time-table."

Leaving a junction applies

- (1) Trains coming off a branch or diverging route to a main route
- (2) Trains moving from a main route to a branch or diverging route
- (3) Trains of a main route originating at a junction station

(4) Trains moving over a main route before leaving a junction station where opposing superior trains terminate or superior trains of same direction originate.

If a superior train terminates at an intermediate station no opposing inferior train should leave such station until it is ascertained that the superior train has arrived.

If a superior train originates at an intermediate station no inferior train of the same direction should leave such station until it is ascertained that the superior train has left.

Rule D-83 is the same as 83 with the exception of that part that applies to opposing trains.

In answer to a desire of some Railroads to add to Rule D-83 "Extras may pass and run ahead of \_\_\_\_\_ class trains", the Committee on Transportation on Oct. 6, 1911, replied as follows: "The Committee sees no objection to the addition of these words by any Road so desiring, as it considers the practice to be a good and safe one."

#### MEETING AN EXTRA BY CHECKING IT ON THE REGISTER.

(Not Standard).

In meeting extras at register stations the fact that an extra as specified in an order appears on the register is not sufficient. The time of arrival of such extra must be considered, as the same engine may be run extra into the register station several times on the same day.

On some Railroads this is not sufficient and trains receiving an order which requires them to remain at a register station until a specified extra arrives—whether it is a meet order, right order or time order (during the time existence) must either see the extra, have the order annulled, superseded or obtain an order stating that such extra has arrived at \_\_\_\_\_ on Order \_\_\_\_\_ (the number of order held requiring the meet).

On Divisions where there are helpers an engine often runs extra into a register station several times during the day. Mistakes are occasionally made in registering time of arrival and also in registering and reading the time and this rule prevents a train from leaving before the arrival of the extra. It also has a tendency to reduce

the number of orders of no value that are sometimes delivered when they should have been annulled.

If the meeting point is a register station and no means of communicating with Dispatcher after arrival, it is then his duty to furnish additional information by train order; for example, "Meet Extra \_\_\_\_\_ at \_\_\_\_\_ on second (or third) trip" as the case may be, or any other information that will make it clear that the extra has arrived on the trip they are required to meet it. While a condition of this kind is less liable to exist on Divisions where there are no helpers, yet it may. All that is necessary to create it is to run the same engine extra into the same register station two or more times in one day.

#### CHECK OF TRAIN REGISTER.

(Not Standard).

FORM _____				
CHECK OF TRAIN REGISTER				
STATION — DATE _____ 191__				
CHECKED BY COND'R _____				
No. _____		AT _____		M. _____
No. 1	SIGNALS DISPLAYED	ARRIVED	LEFT	When Signals Displayed to Non-Register Station State Where To

Before leaving intermediate register stations conductors must be governed by Rule 83 and enter on this blank all trains that have arrived and left that are superior, and personally deliver to enginemen. Enginemen must not leave such stations unless this check indicates that all trains effecting their movements have arrived and left, or orders received permitting them to proceed. Check all sections of a schedule and see that none are omitted. Conductors and enginemen must be governed by signals displayed to and taken down at non-register stations as designated hereon (see Rule 96).

### **GIVING PROCEED SIGNAL.**

(Rule 84).

"A train must not start until the proper signal is given".

A proper signal is one given by the conductor as provided in the rules. Conductors should place themselves in the most advantageous position to direct the movement of their trains. If they are not in view of the engineman and can not so place themselves they may pass the signal to the brakeman, who will relay it to the engineman. The practice of conductors authorizing brakemen to give proceed signal for them is wrong. While the rule does not say the conductor is the only one authorized to give the proceed signal, yet it is an undisputed fact that he is in authority and should personally direct the movement of his train. Only the conductor should announce "All aboard" except in case of long trains when brakemen may do so to prevent leaving passengers or to prevent a condition where it would be necessary for passengers to get on after train starts or get left.

### **TRAIN OF ONE SCHEDULE ON TIME OF ANOTHER SCHEDULE OF SAME CLASS.**

(Rule 85).

If a train of one schedule is on the time of another schedule of the same class in the same direction, it will proceed on its own schedule. This applies whether it is at an intermediate station or leaving an initial station.

Trains of one schedule may pass trains of another schedule of the same class and extra trains may pass and run ahead of ——— class trains and extra trains. (The regular trains which extras are allowed to pass and run ahead of must be designated by each Railroad).

While the rule states that extra trains may pass and run ahead of ——— class trains it must be presumed that extra may also run ahead of them if extra falls back on their time and the regular train is not there to be passed.

A section may pass and run ahead of another section of the same schedule, first exchanging orders, signals and numbers with the section to be passed. When changes of this kind are made conductors and enginemen should be careful to exchange all train orders effecting their respec-

tive sections as some sections are sometimes restricted by orders and the following section does not hold a copy.

Dispatchers should include all sections in orders when practicable, especially those that are running closely together, and thereby avoid any possibility of collision should an order be overlooked or lost in making the exchange.

If a section (light engine) without a conductor finds it necessary to exchange with a section which has both a conductor and engineman, then the exchange could only be made with one of them, preferably the conductor, and conductor should then consult with the engineman. Such moves, however, should be discouraged. It should be understood that the responsibility rests entirely with those making the exchange. Dispatcher should be advised of any change from the first available point of communication as it may make a difference in the issuance of orders, especially where engine numbers are used for identification.

### **CLEARANCE OF SUPERIOR TRAIN (Rule 86, 87, 88 and 89).**

(Rules 87, 88 and 89 applicable to Single Track Only).

The following is based on clearance required in Standard Rules (5 minutes). Where such clearance differs from that of any Railroad, the rules of such Railroad should be respected.

"An inferior train must clear the time of a superior train, in same direction, not less than five minutes, but must be clear at the time a first class train, in the same direction, is due to leave the next station in the rear where time is shown."

If the stations are so close together that under that portion of the rule requiring inferior train to be clear at the time the first class train is due to leave the next station in the rear where time is shown would be less than five minutes, then a five minute clearance should be made. The object of this portion of the rule being to permit the inferior train, to use more time ahead of the superior train, for, without this, the inferior train would have to clear the following first class train five minutes *before* they were due to leave the next station in the rear.

No form of block signals in any way modify rules relative to clearance of superior trains.

"An inferior train must keep out of the way of opposing superior trains and failing to clear the main track by the time required by rule must be protected as prescribed by Rule 99."

"Extra trains must clear the time of opposing regular trains not less than five minutes, unless otherwise provided, and will be governed by train orders with respect to opposing extra trains."

Before authorizing any extra train to move the Dispatcher must make provision for it to meet every opposing extra by placing the necessary orders for delivery to opposing extras before they reach the meeting point, and either have work extras over whose territory the extra must pass under protection of flag or ordered to clear the main track or require the extra to protect against the work extra.

"At meeting points between trains of the same class the inferior train must clear the main track before the leaving time of the superior train."

It should be understood that clearing before the leaving time does not mean to clear *at* the leaving time. The inferior train should be clear of main track and switch lined up and locked at least one minute before the leaving time of superior train, and a greater clearance is preferable. By force of habit many are of the opinion that it is only necessary to clear *at* or *by* the leaving time of the superior train which is not only wrong but unsafe.

"At meeting points between extra trains, the train in the inferior time-table direction must take the siding unless it is otherwise provided."

If westward regular trains are superior by direction over opposing trains of the same class, an extra east must take siding at the meeting point with an extra west unless otherwise provided by train order or special rule in the time-table. If eastward regular trains are superior by direction over opposing trains of the same class the westward extra must take this siding. Likewise northward and southward. This in no way establishes superiority by direction between opposing extras as superiority by direction can only be conferred by time-table, and extras can not be created by time-table.

The opinion of many that there is a superiority by direction between extras at the meeting point is erroneous.

Whenever it becomes necessary to back in at a meeting point with a superior train a flagman must be sent ahead as prescribed by Rule 99 unless provision is made by train order permitting the move without protection. If such an order is issued the superior train must stop far enough in advance of the switch to be used by inferior train in backing in to permit them to pull by clear of the switch. If the view is obscure such orders should not be issued and if, through ignorance of conditions or, if temporary conditions arise which obscure the view, extra precaution should be taken by sending a flagman ahead.

When orders are issued for inferior train to back in, the superior train must not assume they have already done so because they see a train on the siding. If the inferior train is clear before the arrival of the superior train they should send a flagman out to signal superior train ahead. If superior train is instructed to run by and back in on the siding for inferior train the same procedure should apply.

"At meeting points between trains of the different classes the inferior train must take the siding and clear the superior train at least five minutes and must pull into siding when practicable. If necessary to back in, the train must first be protected as prescribed by Rule 99 unless it is otherwise provided."

The practice of placing special rules in time-tables requiring the superior train to take the siding when meeting inferior trains at specified points when meeting under time-table superiority, is not commendable owing to the fact that superior train does not always know that inferior train will be there and are sometimes unable to see owing to obscure view.

In the standard rules the following note to Rule 89 appears: "Where greater clearance is necessary, Rule 89 should require a clearance of TEN minutes."



## INFERIOR TRAIN PASSING SUPERIOR TRAIN ON THEIR DEAD TIME.

If a schedule has an arriving and a leaving time at an intermediate station (so called dead time) any inferior train may pass it provided it can clear the time at such station as required by the Rules. This, however, does not authorize it to run ahead of the superior train ~~on the same~~ ~~for the same~~ time, and it must respect the schedule of the superior train as required by the Rules.

See A. R. A. Ruling, Feb. 24, 1893.

## STOP AT SCHEDULE MEETING POINT.

### RULE 90.

(Applicable to Single Track Only).

Trains must stop at schedule meeting stations, if the train to be met is of the same class, unless the switch is properly set and track clear. An inferior train must fully protect itself against a superior train if it finds owing to some unforeseen delay that it is not able to make the required clearance. The Train Rules Committee of the American Railway Association on October 8, 1889, stated in reply to a suggestion that the words "of the same class" be omitted so that Rule 90 would apply to all classes of trains, "The judgment of the Committee was that the rule as approved by the Convention is correct and according to the best practice. The Committee believes that as few restrictions and exceptions should be interposed in the way of permitting trains to make time, as, for example, that trains delayed at stations should protect themselves rather than continue the old practice of compelling all trains to feel their way into stations expecting to find trains occupying the main track without proper protection. The precaution required by Standard Rule 93 (present Rule 90) is thought to be necessary only for cases in which there is no time clearance."

This rule does not in any way relieve the train of inferior direction from properly protecting itself, neither does it authorize it to crowd the required clearance. The first paragraph of Rule 88 requires that the train of inferior direction must be in to clear *before* and not *at* the leaving time of the superior schedule.

If the superior train is five or more minutes late on its schedule one would infer, from the decision of the Committee, Oct. 8, 1889, that Rule 90 (first paragraph), should not then apply for the reason that the five minutes would give inferior train ample time to get out a flagman if it was delayed at the last minute in taking the siding, or at least as much time as any other inferior train would have.

As the clearance under all time orders is the same as if the movement is made against the schedule of the train, then it would seem consistent to require the superior train to apply the same principle if late and running under time orders, at stations prior to reaching their regular schedule meeting station, the same as they are required to do under the second paragraph of the rule which reads as follows: "When the expected train of the same class is not found at the schedule meeting station, the superior train must approach all sidings prepared to stop, until the expected train is met." Trains must stop clear of the switch used by the train to be met in going on the siding. See No. 5, Diagram (1), Plate 1, Page 17.

## SIGNAL CALLING ATTENTION TO MEETING POINT.

(4th Par. Rule 90).

"The engineman will give Signal 14 (n) at least one mile before reaching a schedule meeting point with a train of the same or superior class, or a point where by train order the train is to meet or wait for an opposing train. Should the engineman fail to give Signal 14 (n) as herein prescribed, the conductor must take immediate action to stop the train."

Engineman, whether train is equipped with communicating signal or not, should give two long and one short sounds as provided to inform trainmen that he has not overlooked the meeting point with the train of the same class, or a point where by train order the train is to meet or wait for an opposing train. Should he fail to do so train must be stopped by trainmen before reaching the fouling point of track to be used by train to be met.

This signal should be used by an inferior train when approaching a station where a superior train is to be met under time-table superiority, whether it is a regular full-faced schedule meeting point or not. It should also be

given whether the trains are to meet under Form A or any other form of train order.

On roads where the rules require conductor to give the engineman a signal for this purpose, if engineman does not immediately answer the signal, the conductor must take immediate action to stop the train.

### **SPACING OF TRAINS.**

(Rule 91).

"Unless some form of block signals is used, trains in the same direction must keep at least five minutes apart, except in closing up at stations. A train following a train carrying passengers must keep at least ten minutes behind it."

The rules of many Railroads require trains moving in the same direction to keep ten minutes apart unless some form of block signals is used. If the above standard rule is in effect it will be necessary for the Dispatcher in running extras carrying passengers to designate in the order that it is a passenger extra and, in some instances, notify freight trains that have no other means of obtaining the information that there is a train ahead with passengers, also issue instructions to operators to space following trains ten minutes behind extras with passengers. The same should be done when stock trains with men in charge of stock are run extra or on a schedule. This would seem to be rather unsatisfactory and no doubt it would be wise to make it ten minutes in all cases where traffic permits.

### **ARRIVING OR LEAVING IN ADVANCE OF SCHEDULE TIME.**

(Rule 92).

"A train must not arrive at a station in advance of its schedule arriving time."

When but one time is shown, and it is indicated as the arriving time, for example, the end of the run on a Division or Subdivision, this rule applies just the same as at an intermediate station where there is an arriving time shown.

If a run-late order is issued requiring a train to run late into a station where an arriving time is shown, then the arriving time becomes the schedule arriving time plus

the run-late, and the train must not arrive in advance of that time.

A train must not leave a station in advance of its schedule leaving time."

Should an order be issued to run late from a station, then the leaving time becomes the schedule time plus the run-late.

### **MOVEMENT WITHIN DEFINED YARD LIMITS.**

(Rule 93).

Within yard limits the main track may be used, protecting against first class trains. Second and inferior class and extra trains must move within yard limits prepared to stop unless track is seen or known to be clear. (The trains which must be cleared or protected against and those that must move prepared to stop are left optional with the Railroad adopting the rule).

Under Rule 93 if any train or engine occupies the main track on the time of a first class train, or a first class train or any section of a first class schedule occupies the main track on the time of another first class train or any section of a first class schedule, such train must be protected.

If a second or inferior class or extra train enters a yard they should be held responsible for collision with any train, engine or cars that may be occupying the main track within such defined yard.

It is not assumed, however, that cars will be left standing entirely unprotected within yards when the view is obscure or at points where they could not reasonably be expected.

In extreme cases even though no first class train is due precautionary measures should be taken when the main track is occupied at unusually bad locations or when the elements obscure the view.

Should it become necessary to back out of a siding, or move on the main track where view is obscure, extra precaution should be taken. This, however, should not relieve the incoming train from the responsibility of a collision.

Yard crews should be kept advised as to the probable arrival of all trains. The time of arrival of first class

trains should be given crews of yard engines to avoid delay, but the manner in which either a yard engine, or other engine or train may occupy the main track on the time of a first class train without protection is by obtaining a train order permitting them to do so.

The protection within a yard may not in all cases be the same as required by Rule 99 outside of yard limits, but it must be sufficient to prevent an accident.

An extra train moving under old Example 3, Form G (which is no longer standard) through yard limits must <sup>move</sup> protect the same as any other extra unless otherwise directed by train order.

Yard limits should be as short as practicable and as few as possible to properly operate trains. Enginemen of first class trains should always keep in mind that a car may be shoved out of a switching lead or other track at any time, or a switch may be left open.

The rule of any Railroad requiring flagmen to protect rear of the train, while standing within yard limits, whether a first class train is due or not, should be complied with.

When a following section of a first class schedule is run late or given an order to wait and same is held by the preceding section, and the Dispatcher desires to reduce the time or annul it, the annulling order must be given the preceding section and conductor must immediately inform his flagman.

The same should apply between first class trains when the leading train holds an order requiring the following train to run late or wait which might suspend Rule 93.

#### **TRAIN DISABLED BETWEEN POINTS OF COMMUNICATION.**

(First Paragraph Rule 94).

If a train overtakes another train so disabled that it can not proceed, it will pass it, if practicable, and, if necessary, will assume the schedule and take the train orders of the disabled train, proceed to the next available point of communication, and there report to ———. (optional with Company adopting the rule). "If practicable" is interpreted as meaning—1st. Can following train get by? 2nd. Has either train authority to pro-

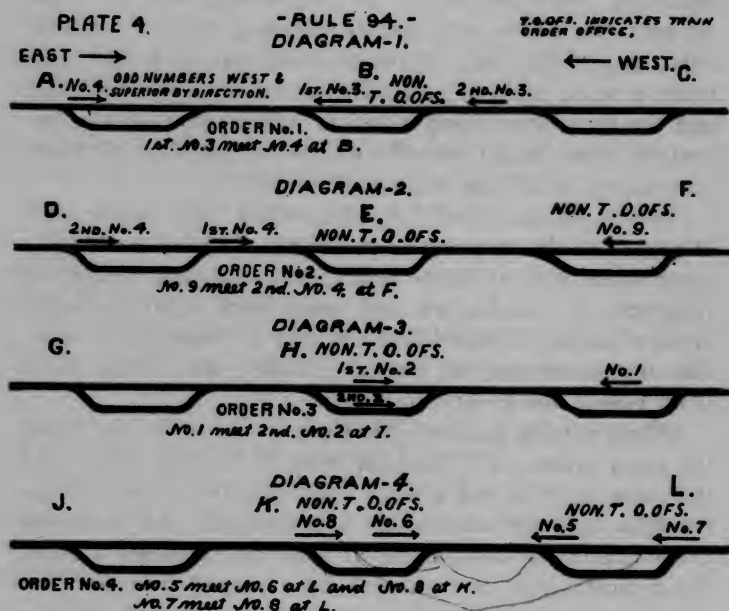
ceed. If the disabled train has authority to proceed, the following train may use it after passing them, if it has no authority of its own and the disabled train is the least important of the two. If the disabled train is a first class train, a stock train, a perishable or other important train, and the train overtaking it is less important, then the important train should take the engine of the train of lesser importance, if only an engine is needed.

The A. R. A., April 7th, 1891, ruled "that any trouble in regard to the meaning of the word 'disabled' could only occur when it is of minor importance. In such a case the judgment of conductors and enginemen must be used, always bearing in mind that the rule is intended to expedite the movement of trains." Under this ruling there is no reason for an unusual delay.

When a train assumes the right or schedule and takes the train orders of a disabled train, it becomes that train the same as if it had always been, and the disabled train becomes the train with which it exchanged. All authority to move must be exchanged. If after an exchange is made the disabled train is overtaken by a second train and the conditions are such that the overtaking train can not proceed on its own authority, and by this time the disabled train's authority will permit them to proceed, another exchange may be made as in the first case. The disabled train will assume the right or schedule and take the train orders of the last train with which it has exchanged, and will, when able, proceed to and report from the next available point of communication.

Rule 94 applies between all kinds of trains whether regular, extras, sections of the same schedule or sections of different schedules, or between an extra and a regular train, regular train and section or a section and an extra.

If, after a train has exchanged with a disabled train between points of communication and they afterwards receive orders to proceed under their original authority, the Dispatcher should issue the necessary orders to prevent the disabled train (when able) from proceeding as the train with which it last exchanged further than the point at which the preceding train is authorized to resume its original authority.



### TRAIN UNABLE TO PROCEED AGAINST OPPOSING TRAIN.

(Second Paragraph Rule 94).

"When a train, unable to proceed against the right or schedule of an opposing train, is overtaken between communicating stations by an inferior train or a train of the same class having right or schedule which permits it to proceed, the delayed train may, after proper understanding with the following train, precede it to the next available point of communication, where it must report to the ———. (designated official). When opposing trains are met under these circumstances, it must be fully explained to them by the leading train that the expected train is following."

The principle involved is that if a train is delayed between points of communication for an opposing train and is overtaken by a train of the same class or an inferior

train which holds authority to proceed to the next point of communication against any train the delayed one can not move against or any other opposing trains known to them and an opposing train can not leave such point until the train that overtook the delayed train gets there, and Dispatcher has no means of restricting the following train after the preceding train has left, they may proceed with safety and save delay following a flagman.

If necessary (although not according to rule) to apply the second paragraph of Rule 94 out of a train order office it should be done only on authority from the Dispatcher, in which case he must not then issue an order restricting the following train should he get into communication with the opposing train after the preceding train has left.

If overtaken between stations by a superior train having right or schedule which permits it to proceed, it is not likely the conductor and engineman of the train overtaken would delay the following train, their own train and the opposing train they are unable to move against while a flagman precedes them several miles, but apply the principle of the second paragraph of Rule 94.

### Diagram 1, Plate 4.

#### ORDER 1

First 3 meet No. 4 at B.

Note: No. 3 superior by direction. No means of communicating with Dispatcher from B.

First 3 arrives at B, its meeting point, and is waiting for No. 4. While so doing, Second 3 arrives. When a section is restricted all sections following are equally restricted, therefore, First and Second 3 must remain at B for No. 4. The best evidence is that when No. 4 receives the order to meet First 3 at B it is going to move not only against the first but all the following sections of the same schedule. The second section of No. 3 in this case does not hold authority which permits it to proceed, as the second section's authority depends on the movement of the first, therefore First 3 could not precede it against No. 4.



**Diagram 2, Plate 4.**

**ORDER 2.**

*No. 9 meet Second 4 at F.*

Note: No. 9 superior by direction.

No means of communicating with Dispatcher from F or E.

First 4 with no orders against No. 9 proceeds and is unable to go further than E against No. 9's schedule. While waiting at E for No. 9 it is overtaken by Second 4 holding an order to meet No. 9 at F. Second 4 can not move out of E until First 4 goes, and First 4 can not move until No. 9 arrives, and No. 9 can not leave F until Second 4 arrives. The meet at F (order No. 2) is in effect until fulfilled, superseded or annulled. First 4 consults with Second 4 and it finds the second section has authority to proceed against all opposing trains including No. 9, therefore First 4 precedes Second 4 on its authority to F to meet No. 9, notifying No. 9 that Second 4 is following.

**Diagram 3, Plate 4.**

**ORDER 3**

*No. 1 to meet Second 2 at I.*

Note: No. 1 superior by direction.

No means of communicating with Dispatcher from H.

First 2 with nothing on No. 1 proceeds to H and becomes disabled. Second 2 overtakes First 2 at H, applies first paragraph of Rule 94, passes it, exchanging all orders; now First 2 is able to move but has no orders to move against No. 1 that is overdue. First 2 consults with Second 2, which has authority to proceed, and first 2 precedes it to I against No. 1 carrying a flagman from Second 2 authorizing No. 1 to proceed to H against disabled Second 2. All trains are moving except the disabled one.

**Diagram 4, Plate 4.**

**ORDER 4**

*No. 5 meet No. 6 at L and No. 8 at K. No. 7 meet No. 8 at L.*

Note: Nos. 5 and 7 superior by direction.

No means of communicating with Dispatcher from K or L.

No. 6 proceeds to K and is delayed until unable to make L for No. 7. No. 8 overtakes No. 6 at K and as No. 5 has not arrived and No. 6 can not proceed against No. 7 to release No. 5, both Nos. 6 and 8 are tied up at K and Nos. 5 and 7 are tied up at L. No. 6 can not pre-

cede No. 8 as No. 8 has no authority to move against No. 5. No. 5 can not precede No. 7 as No. 7 has no authority to move against No. 8. All four trains would be tied up because the conditions by which a train could move under the principle of second paragraph of Rule 94 do not exist, i. e., neither train has authority to move against *all* opposing trains.

When a train is overtaken by an inferior train, or train of the same class having right or schedule which permits it to proceed from such point against all opposing trains, and if train that is overtaken precedes the following train it should not pass any station ahead of the schedule time or ahead of the time of any time order that might be held by the train preceded. If train preceded is restricted by a meet or right order held by an opposing train at a point beyond the station where leading train is overtaken and the next point of communication, such restriction must be respected.

That portion of Rule 94 reading "having right or schedule which permits it to proceed" prevents its application unless the train that overtakes the other has authority to proceed from point where overtaken against *all* opposing trains.

If a train is preceding another, the train preceded must not sign a 31 form order if such order restricts its movement or accept from any source a restricting order effecting it within the limits in which the preceding train is using its authority as the preceding train is using all the authority held by the following train.

**SECTIONS OF SCHEDULES.**

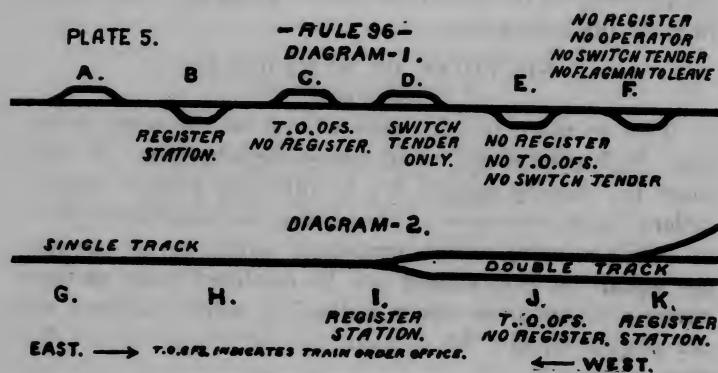
(Rule 95).

Two or more sections may be run on the same schedule. Each section has equal time-table authority. A train must not display signals for a following section without orders from ————. (Generally the Superintendent.)

While running under time-table authority all sections are equal but this should not be confused with sections running under train order authority, where sections are not always equal. All sections except the last must display signals.

If a following section should pass the leading section without knowing it has done so, and, for example, the second section is running ahead of the first section or the fourth ahead of the third, the section that passed the other is responsible except where the leading section is into clear on some track out of view of the following section, in which case the leading section is at fault for not leaving a flagman to prevent the following section from passing it. The result of a following section passing and running ahead of the leading section without any knowledge of it or any order authorizing it is most likely to result seriously.

Should a following section find that the leading section has registered out of a registering station it is not positive evidence that it has left the yard and the responsibility still rests with the following section should it leave ahead of them. The leading section after registering out should, if it does not get out within a few minutes, change its leaving time on the register and also see that the following section does not leave ahead of it. At any station the leading section should, when clear of the main track, keep a sharp lookout for the following section and prevent it passing. However, this is only an extra precaution and does not relieve the following section of any responsibility. The leading section is not required to give the whistle signal (Rule 14-k) one long and two short, to a following section.



## TAKING DOWN SIGNALS.

(Rule 96).

This is one of the most important Rules. It seldom becomes necessary to apply it and for that reason its importance is sometimes overlooked. It applies to single track only, as it is only necessary to notify opposing trains. The general impression is that the Dispatcher should first be notified, but this is only necessary in the regular manner of reporting trains as he issued the order requiring the signals to be taken down. The idea many have that the Dispatcher will take care of such a move is wrong, as it requires some one at the point where signals are taken down to properly protect opposing trains until the following section arrives, and that responsibility can not be delegated to the Dispatcher. However, the Dispatcher should see that proper protection is made when it is possible, conferring with the operator to see if he thoroughly understands his duty in this respect, but this does not relieve the operator of the responsibility.

That portion of the rule reading "if there be no other provision" refers to a register, as at Station B, Diagram 1, Plate 5.

If a section of No. 1 scheduled F to A displays green signals to register station B and takes them down, and leaves with no signals, the conductor should register in with green signals on one line showing his arriving time, and register out with no signals on another line showing time of leaving, unless register provides two columns—one for signals arriving and one for signals leaving. It is not then necessary to arrange with the operator at B to protect opposing trains, except where there is a rule permitting some opposing train of the same class or opposing inferior train, to pass such register without registering in person or checking, leaving a register ticket with the operator who registers for them.

The importance of a register is the checking of it.

If a train takes down signals at Station C (Diagram 1) an open train order office but no register, and proceeds before the following section arrives, the conductor must arrange with the operator in writing to notify all opposing

trains until the following section arrives. If the following section displays signals to the same station they should do likewise, and so on until the last section has arrived. Should the schedule for which signals were taken down become more than 12 hours late at that station, or the operator receives the annulment of the following section into station C, it is not then necessary to notify opposing trains as no more sections may run into that station.

If there is no register or operator, as at Station D, but there is a switch-tender, then the same arrangement should be made in the same manner with the switch-tender, provided, of course, he is a responsible person and thoroughly understands what he is required to do. If any doubt exists a flagman should be left to notify opposing trains.

If there is no register, no operator, nor switch-tender as would be the case at Station E then a flagman must be left with the same written instructions to notify all opposing trains until the following section arrives.

After opposing trains have been notified they may then proceed provided they have the necessary authority against the following section. Such authority may have been received at some previous station.

In case of a light engine running as a section displaying signals and there is no register, no operator, no switch-tender, nor flagman to leave as at Station F (Diagram 1) it should remain there until the following section arrives and then proceed unless instructions are received from the Dispatcher to do otherwise.

In case it should become necessary to place signals on No. 2 (running from A to F, Diagram 1) at Station C for a train that is to be moved out of A as an extra to C and then as Second 2 from C, and No. 2 passed an inferior train at B while it had no signals, it would then be the Dispatcher's duty to protect such inferior train from leaving C between the sections without orders.

Under Diagram 2, if No. 2 displays signals from G to J and an opposing inferior train is authorized by rule to register by ticket at I (the end of double track) after having checked the register at K and making a personal check, if necessary, between K and the end of double track

at I against those not on the register at K, it would be the Dispatcher's duty to protect such opposing train against the following sections of No. 2 by train order, as Station J where signals are taken down is on double track and Rule 96 does not apply to the operator at that station, and he can not be held responsible.

This condition exists in some places but it should be eliminated.

When signals are taken down at a point where there is no register, but there is an operator or switch-tender or if neither operator nor switch-tender, a brakeman is left in addition to notice being given at such point, the conductor must also give notice to opposing inferior trains and trains of the same class met until the train has arrived and registered at the next register station. This is required of conductor as an extra precaution. It is also necessary that provision be made on all registers for the registration of signals displayed to any station between registers. It is as important to check the column of register provided for this information as it is to check the column provided for signals displayed to the register station. When signals are taken down between register stations and same designated on the next register, the operator at that register station should notify any opposing train leaving such station, that is by rule authorized to register by ticket, that signals were taken down by the superior train at the intermediate station.

In applying Rule 96 at the end of double track as at Station I (Diagram 2) a train moving from single to double track should be considered as a train of the single track, and the rule applied to opposing trains moving from double to single track the same as if it was single track both ways from Station I.

#### **WORK EXTRAS WITH AND AGAINST CURRENT OF TRAFFIC. EXTRA'S RUNNING ORDERS.**

(Rules 97 and D-97).

Extra trains must not be run without orders from the ————. (Generally the Superintendent.)

On double track extras are often permitted to run without running orders by special rule upon receipt of a clear-

ance card or order from the Yardmaster or other employee to whom such authority is given.

"Work extras must move with the current of traffic unless otherwise directed".

Note: See Work Extra D-Form H, page 143.

### **APPROACHING END OF DOUBLE TRACK, JUNCTION, RAILWAY CROSSING OR DRAWBRIDGE.**

(Rule 98).

Trains must approach the end of double track, junctions, railroad crossings at grade, and drawbridges with caution. Where required by rule or law, trains must stop.

The object of this rule is to prevent any possible chance of a collision with or side-swiping of trains on other tracks or trains on a foreign road or running into open draws. As different laws exist in different States it is necessary that employes should make themselves familiar with laws regarding the passage of trains of one road over grade crossings of another. "Trains using a siding must proceed with caution, expecting to find it occupied by other trains."

### **PROTECTING REAR OF TRAIN.**

(Rules 99 and 100).

25. When a train stops under circumstances in which it may be overtaken flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes and when necessary, in addition, displaying lighted fusees.

If there is a clear view of track for several miles to the rear the flagman should station himself at rear of train ready to proceed in ample time to place his torpedoes a sufficient distance to insure full protection. The placing of torpedoes is a very important factor in flagging. They are a protection should flagman fail for any reason to perform his duty, after going out the necessary distance. They will attract attention of enginemen. Torpedoes should always be placed though the flagman remains only a moment.

When whistled out flagman must go immediately whether he considers it necessary or not. If, after getting out a distance short of what would be considered full pro-

tection, he is recalled, he should continue to go back if he sees or hears a train coming, or conditions are unusually bad. If not, he should place two torpedoes and, if necessary, at night a lighted red fusee before returning.

When a flagman reaches a point which is necessary to insure full protection he should immediately place two torpedoes on the rail and remain until recalled. When recalled he should, if necessary, at night or during stormy weather, leave a lighted red fusee to protect his train until he reaches it and it gets under headway. If in snow storm and he is making slow progress he should leave another lighted red fusee after getting part way in. Flagman should always keep in mind the most dangerous time is when returning. When there is any doubt that train needs protection he should not hesitate but go back immediately and without being told.

Flagman should always be dressed to suit the weather conditions and have with him the necessary flagging equipment. He should not under any circumstances depend on the block system to protect his train. He should never have any previous understanding with a following train that his train is going to head in at a certain station and for the following train to look out for it heading in, but must drop off and go back a sufficient distance to stop the following train.

The flagging rule of the many Railroads varies considerably. The Standard Rules permit each Railroad to designate positive action on part of flagman as to distance and placing of torpedoes and fusees. Flagman should be particular to follow such instructions and, if weather conditions require it, go farther than distance designated and place additional torpedoes.

Engineman should always keep in mind when he stops for a reason his own that trainman may take advantage of the stop to repair some defect they may find, or put in a brass, and not call in the flagman until so instructed by conductor.

Whistling out a flagman should not become a habit. The reason for such a signal is in case engineman foresees a delay that can not be foreseen by flagman.



During blizzards and heavy snow storms trains moving in same direction (especially passenger trains) when track is not protected by automatic or other form of block signals should be manually blocked a station apart. However, trainmen must not expect this to be done.

In the protection of the rear of train trailing smoke and sand storms should always be considered. When a train has dead time at a station the rear should be protected the same as at other stations. The two exceptions to Rule 99 are the temporary suspension of it by train order and the exception in Rule 93.

Flagman should always take into consideration the distance an engineman on a following train can see him. If only a short distance flagman should go out further.

When flagged and engineman gives two short sounds of the whistle, flagman should continue to signal engineman until he knows that *his* signal has been acknowledged. The two short sounds of the whistle may have been an answer to some other signal.

In placing torpedoes in stormy weather, on roads where one torpedo is a signal to stop, as an extra precaution they should be duplicated on opposite rail, if conditions warrant.

When flagged engineman should not proceed until the cause for flagging is satisfactorily explained. When necessary to protect the front of train, if one of the brakemen or conductor is not available, the fireman should perform the duty.

When speed is materially reduced and view is obscure, either day or night, lighted fusees should be thrown off, preferably yellow, but red if conditions are unusually bad.

When weather or other conditions are such that day signals can not be plainly seen, night signals should also be used. Flagman should have in his possession by day a red flag and torpedoes, and by night a red light, a white light, torpedoes and fusees. When near the end of the day and there is a possibility of having to remain out until night, flagman should have full night flagging equipment.

When weather conditions are such that one man can remain out only a limited time, conductor should arrange

to relieve flagman at intervals. Always keep in mind that once out flagman must not come in until recalled or relieved.

Before pulling out of a siding or a junction on to a main route a flagman should first protect against following trains when conditions require it before such track is fouled.

There should be a flagman stationed on the rear of every train; if not on rear end of rear car he should take position as near thereto as possible. Avoid stopping in obscure places and on descending grades or in or near tunnels, if possible.

When a stop of short duration is to be made with badly obscured view to rear, a fusee should be thrown off at a reasonable distance to rear of expected stop.

Never assume there is not a train following because you have not passed a train on the road. A train could leave some time after you, or an engine from a train in opposite direction could be started behind you and overtake you if running at a higher speed.

When a flagman receives instructions to hold, for example, all except first class trains he should understand that the equipment or general make-up of a train is not *positive identification*. The only sure way is to stop all trains in the particular direction and make a positive identification. Passenger equipment may be run on a freight schedule, and vice versa. Leaving a flagman to notify a following superior train that your train is running ahead of them is only a notice of your movement on their time.

### PROTECTING AGAINST OBSTRUCTIONS.

(Rule 101).

"Trains must be fully protected against any known condition which interferes with their safe passage at normal speed. When conditions are found which may interfere with the safe passage of trains at normal speed and no protection has been provided, such action must be taken as will insure safety."

If any doubt exists as to the safe condition of track, especially during storms or threatening conditions which may interfere with safe passage of trains, train and enginemen should not hesitate to send a flagman ahead.

When track conditions are found to be unsafe for normal speed, and no protection has been provided, flagman should be left to notify following trains until notice can be given by train order and the necessary signals displayed. The train finding such conditions should notify opposing trains met and provide for notice at junction points for trains coming from a diverging route until assured that necessary instructions have been issued.

When a caution signal is displayed it should be placed to the right of track for the trains effected and a sufficient distance from the defect to permit engineman to bring train under control before reaching it. A proceed signal should be displayed to indicate the point at which speed may be resumed. Care should be taken not to lap caution signals where two places requiring reduced speed are in close proximity, but place one set of signals to cover both places. However, train and engine men should keep in mind that a caution signal protects until a proceed signal is reached and should two caution signals be displayed the second one governs to the second proceed signal. Signals should be reversed on opposite side of single track for trains moving in opposite direction. On two or more tracks it depends entirely on the position of the respective tracks and whether trains keep to the right or left.

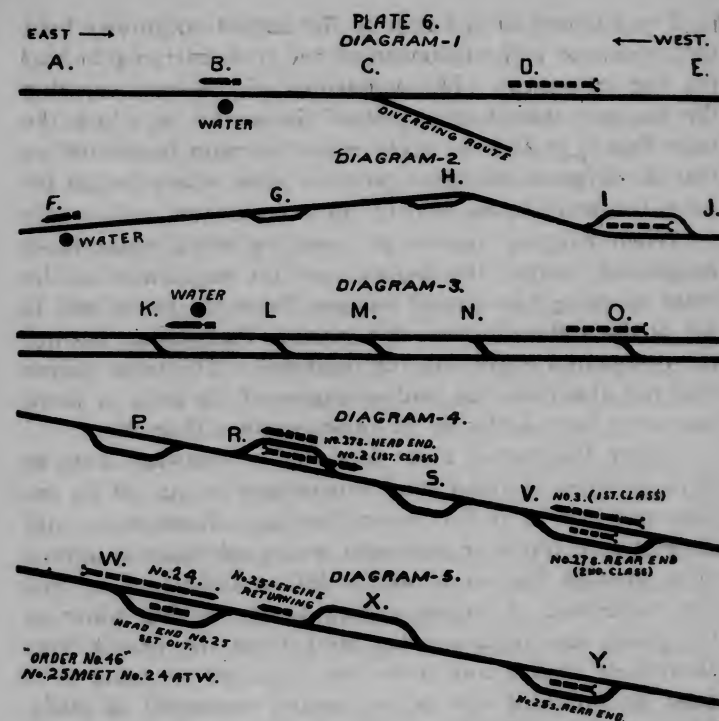
#### **RUNNING UNDER FLAG PROTECTION.**

(Not Standard).

Written instructions to flagmen should be issued to avoid a misunderstanding, as the safety of a flag movement depends on the flagman's instructions being literally obeyed.

A flag is the highest known law on a railroad in the operation of trains. It is a higher authority than a rule or train order. There is but one thing that equals it, and that is another flag in the opposite direction.

A train may move under flag from a train order office when the conditions warrant such movement. However, when it is possible, the Dispatcher should be first consulted. If conditions warrant and the time required to confer with the Dispatcher would cause an unusual delay or a blockade, a train may proceed following a flagman placed on a preceding train to a station where there



is ample room to accommodate such train or to make a movement against an opposing train to facilitate train movement.

A train may move under flag from a meeting point or ahead of a superior train if conditions warrant. When such move is made the train against whom the movement is made must be notified even though the train making such movement arrives first at the station to which it was flagging and is clear of the main track. This, to avoid a possible delay to the train flagged against on reaching the meeting point, and under some conditions which will be considered later, to prevent a collision.

A movement against an opposing train under authority of a following train should not be called flagging. If a train flags against an opposing train there must be a flagman preceding them, not behind them.

The flagman should ride on the engine and notify both the conductor and enginemen of the train carrying him of the flag movement. The engineman of the train carrying the flagman should stop foul of the switch at which the train that is to be held might enter the main track and see that the flagman reaches a point or place where he can inform the train to be held of his instructions.

When flagging against an opposing extra under these conditions, neither the flagman nor the engineman of the train carrying him should assume the extra to be held is not at the station because the extra at that station has not the designated engine on the head end. The train engine may not always be the leading engine of the train or there may have been a change of engines under Rule 94.

Under Diagram 1 Plate 6, should a westward train at D or between D and C find it necessary to cut off its engine and run to B for water, leaving a flagman to hold all westward trains or particular westward trains as agreed upon, another flagman should be left at Junction C to protect movement of engine eastward after taking water at B against any train moving west from the branch line. Movement against any train that is passed en route to B must be provided for before return movement is made. The necessary signals should be placed and a flagman placed in advance of rear portion of train to prevent engine returning to train from striking it, and to protect against an opposing train, if necessary.

Under Diagram 2, should a westward train have to double from "I" to "H" and after reaching "H" finds it necessary to run to "F" for water, having left a flagman at "I" to hold specified westward trains until their engine returns, those in charge of engine must notify all trains which they meet or pass on their way to "F."

The engine that cuts and runs for water should notify all engines and trains it meets or passes, because any one of these engines may be returned from any station between "F" and the flagman at "I", to a point west of "F", if owing to an engine failure of a more important train it becomes necessary to use any one of the engines.

There are times when communication may be had by

telephone or the helper of an eastward train, if one, may hold return orders at the time the engine running for water meets the train they are assisting.

Long runs for water with provision made to return under flag should be discouraged. It is not good practice to pass train order offices without obtaining the necessary orders or instructions and if no such offices exist great care should be taken.

Under Diagram 3, Plate 6 (double track) if the engine of the westward train is cut off and runs for water from O to K leaving a flagman at O to protect the return of engine against the current of traffic, it must always be borne in mind that any eastward train may hold authority to return on the westward track from any crossover between K and O. It, therefore, becomes necessary to protect all the crossovers to prevent such a move between the engine and its flagman at O.

The proper move is to obtain orders (unless authorized to run without orders) to return on the eastward track from K to O or to nearest crossover to the train and then cross over and return to train under protection of the flag.

Under Diagram 4, Plate 6, No. 27 finds it necessary to double from V to R and can make R with head end for No. 2. They place rear of train on siding at V and clear No. 2 at R. No. 2 meets No. 3 at S. After No. 3 passes R, No. 27's engine returns from R to V for rear end under protection of the flagman at V against all except first class trains.

Under Diagram 5, Plate 6, No. 25 holds Order 46 to meet No. 24 at W. No. 25 finds it necessary to double from Y to W. No. 25 should place rear of train on siding at Y and take front portion to W and set it out. If W is not a train order office and No. 24 is there or in sight, No. 25's engine should precede No. 24, flagging it to Y to avoid delay to No. 24. If a train order office, No. 25's engine should not leave W until it ascertains from Dispatcher the time No. 24 should reach W with the object of waiting to flag No. 24 W to Y. No. 24 may be permitted to move ahead of No. 25's engine from W to Y

if the track is clear and conditions are explained and understood.

When a flagman is sent ahead on a preceding train to hold an opposing train written instructions should be furnished him and those instructions shown to train that is to be held. Flagman in such cases should be particular to know that the train he is flagging against is not on some obscure spur or other track.

### TAKE SIDING.

There is no authorized form in the Standard rules for "take siding" or "hold main track".

If inferior train is instructed to hold main track it is equivalent to instructing the superior train to take siding.

"Take siding" may be placed in an order in several ways. There is but one safe and proper construction to place on it, and that is, no matter how "take siding" is inserted in an order it applies only to the train at the station mentioned and to the order in which it appears.

The "take siding" portion of an order is a condition belonging to the meet. The train is not only instructed to meet the opposing train, but in meeting it it is instructed to take the siding. The reasons therefor are many, i. e.:

(1) To facilitate the movement of a train by having superior train clear of main track to avoid stopping a more important one.

(2) To keep an inferior train ahead of a following superior train when an opposing train that is to be met can not go beyond the meeting point for the following superior train.

(3) To give a train descending heavy grades the main track to avoid possibility of running by the switch where it would be unable to back up.

(4) To allow a train long on the road to make its terminal within the limit of the Law.

(5) To allow all trains in one direction to hold the main track for all in the opposing direction.

"When a train is directed by train order to take siding for another train, such direction applies only at the point named in the order."

(See rule under Example P).

Note: Under the following examples westward trains are superior by direction and are designated by odd numbers and move from "A" to "H."

### EXAMPLE "A"

ORDER No. 1:

No. 1 take siding and meet No. 2 at B.

ORDER No. 2:

No. 1 meet No. 2 at C instead of B.

Under Orders 1 and 2, No. 2 takes the siding at C as the meet at B has been superseded.

### EXAMPLE "B"

No. 1 take siding meet No. 2 at D, No. 4 at C and No. 6 at B.

No. 1 should take siding at D, C and B.

### EXAMPLE "C"

No. 1 meet No. 2 at G, No. 4 at F and No. 6 at E and take siding.

No. 1 should take siding at G, F and E.

### EXAMPLE "D"

No. 1 meet No. 2 at D, No. 4 at C and No. 6 at B, No. 1 take siding at D.

No. 1 should take siding at D only.

### EXAMPLE "E"

Eng 25 run extra H to A, meet Extra 26 East at E, Extra 28 East at D and Extra 30 East at B. Extra 25 West take siding at meeting points (or all meeting points).

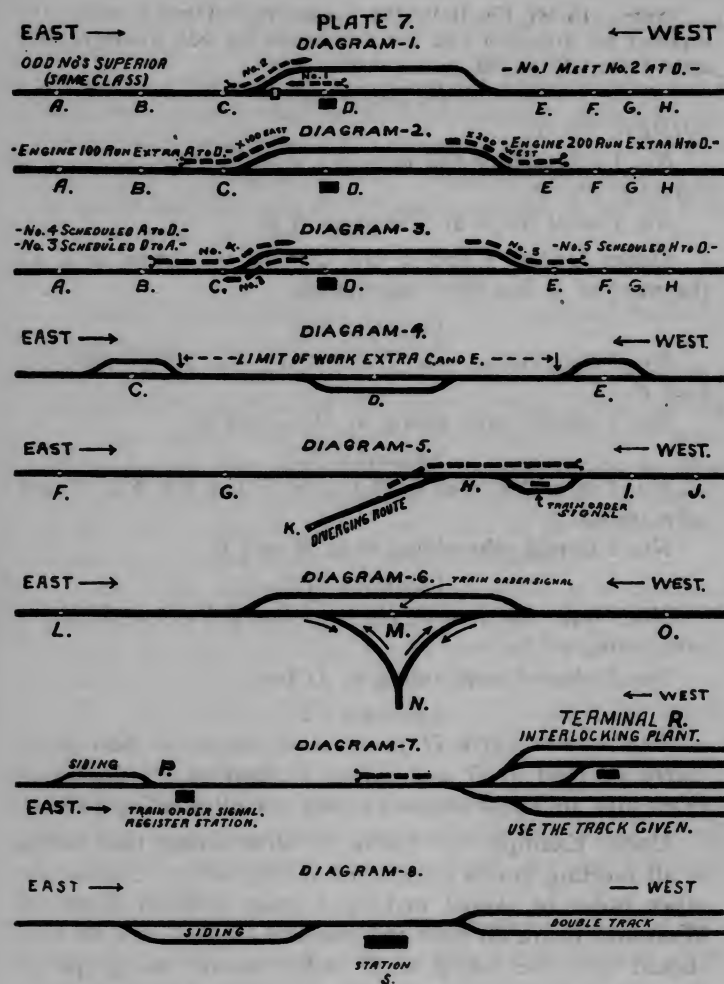
Under Example "E" Extra 25 West should take siding at all meeting points designated in the order. Should another order be issued making a meet between Extra 25 West and Extra 30 East at C instead of B, Extra 30 East should take the siding at C under second paragraph of Rule 88, if Eastward is the inferior time-table direction.

### EXAMPLE "F"

No. 1 meet No. 2 at C instead of D, No. 2 receives this order at C.

Under Example F No. 1 should take the siding at C as the order informs No. 1 (the superior train by direction) that No. 2 will not know of the change until it receives the order at C and it is then on the main track.





#### EXAMPLE "G"

##### ORDER No. 1:

No. 1 meet No. 2 at B, No. 4 at D and No. 6 at E. No. 1 take siding at D.

##### ORDER No. 2:

No. 1 meet No. 4 at C instead of D and No. 6 at D instead of E.

Under 1 and 2, Example G, No. 1 is entitled to main track at D as the take siding portion of Order 1 applies only to D when meeting No. 4.

Orders to "take siding and wait" should not be issued for the reason that the inferior train if it makes the waiting point in the wait order and is on the main track when the time expires and superior train approaches after the wait order has expired, it too, considering it is entitled to main track, occupies it. Thus we have both trains trying to occupy the same main track. Should inferior train make the point designated it should protect after the time is up.

#### WHERE A TRAIN'S AUTHORITY CEASES AT A STATION.

(See Plate 7).

##### DIAGRAM 1.

No. 2 must head in at first switch of siding at D.

##### DIAGRAM 2.

Both Extras 100 East and 200 West must head in at D, the end of their runs.

##### DIAGRAM 3.

No. 5 scheduled H to D must head in at D.

No. 4 scheduled A to D must head in at D.

No. 3 scheduled D to A must head out at west end of D.

Under Diagrams 2 and 3 neither train has authority to the main track and should occupy it only under protection.

##### DIAGRAM 4.

Work Extra has authority only between the west switch at E and the east switch at C. If it occupies main track at either C or E it must do so only under protection.

##### DIAGRAM 5.

If two trains running between F and J meet at H, the siding at H should be considered the meeting place. If a meet is made between a train running from F to J and a regular train scheduled from J through H to station K on diverging route, the junction switch should be considered the meeting place, unless the eastward train receives the order at H, then the siding must be considered the meeting place. If a meet is made between a train running

from J to F and a train running from K on diverging main route through H to J, the siding at H should be considered the meeting place if train order signal is located as shown. If the train order signal was located west of the junction switch at H, the junction switch should be considered the meeting place.

DIAGRAM 6.

If two opposing trains running between L and O meet at M, the siding applies.

If a meet between a train running L to O is made with a train scheduled from N on the diverging route to L on the main route, the west junction switch should be considered the meeting place.

If a meet between a train running O to L is made with a train scheduled from N on diverging route to O on main route, the east junction switch should be considered the meeting place.

DIAGRAM 7.

A train entering the interlocking plant at R must use track authorized by the signals given.

If signals are taken down by a westward train at P (a register station) before the following section arrives, the following section should protect itself while moving from the register to the siding to clear.

DIAGRAM 8.

If meeting under train order at S the siding applies and not the end of double track unless authorized by order or special rule. Eastward regular trains or eastward extras terminating at S head in at west switch of siding, and westward trains terminating at S head in at east switch of siding unless otherwise directed by train order or special rule. No doubt the best results may be obtained by designating the end of double track as the station.

**TRAIN PARTED.**

(Rules 102 and D-102).

If train parts while in motion trainmen must, if possible, prevent damage to detached portions, giving the prescribed signals for train parted. If head end can be kept moving owing to insufficient brakes or the air pump can keep the brakes released on head end with rear angle cock open, train should be kept in motion until it is known that rear portion has stopped.

When returning for detached portion same should be done under protection of flag unless rear portion is in plain view and has stopped. The rear portion of train should never be passed by a following train, but this should not authorize the front portion to return without being preceded a safe distance by flagman whether a superior train is due or not.

With the present brake equipment the movement of the head end for great distances before discovery that train has parted is rather remote, yet it is possible to keep the brakes released with a large pump. While this applies to both double and single track, the following applies to double track only:

"The enginemen and trainmen of the front portion must give the train-parted signals to trains running on the opposite track. A train receiving this signal or being otherwise notified that a train on the opposite track has parted, must immediately reduce speed and proceed with caution until the separated train is passed. When a train is disabled so it may obstruct the opposite track, trains on that track must be stopped."

On two or more tracks trainmen of freight trains should watch closely the side of their train next to other main tracks for any material that may have shifted or fallen off, car doors or car roofs blown off, that will obstruct another track. This is an important duty and should not be overlooked.

Dec. 9, 1896, the Committee on Rules of the American Railway Association made the following rulings:

*Question 1:* "A freight train pulling out of a siding breaks loose three cars from the caboose. The three cars and caboose are stopped on the siding by flagman, who is on the rear end, before they run out of siding. The conductor, who is at the switch, sees that the train is broken apart and jumps on the last car as it passes the switch, leaving flagman on the detached portion on the siding. In the mean time a passenger train running in same direction arrives and flagman stops it and informs it of the circumstances. Has the front portion authority to return for the detached portion?"

*Decision of Committee:* The engine had absolute right to go back to recover the detached portion of train.

*Question 2:* "A passenger train arrives at a siding and finds a caboose with several cars in front of it with markers on rear end of the caboose and no train men at the siding. The engineman and conductor of the passenger train take this portion of a train with markers on the rear as notification of a portion of a train of which the front portion might come back, and wait at the siding until they got assurance to the contrary."

*Decision of Committee:* The passenger train should not have waited.

*Note:* It is presumed the switch was lined up for the main track.

There would seem to be no reasonable excuse in the first case for the engineman leaving the rear end as he certainly knew the switch had to be closed and a signal received after taking the main track. The author believes the position of the switch used by the front portion should always be considered. If lined up for the siding and no trainman at hand to explain the conditions, as there should be, the passenger train should wait. A wreck was once caused by a section man finding the switch open and lining it up with rear end of train on the siding. A following train finding rear of train on siding and switch lined up proceeded and ran into head end returning for detached portion.

#### **PROPER POSITION OF SWITCHES.**

(Rules 104 and 105).

Switches must be left in proper position after having been used. While conductors are responsible for the position of switches used by them and their trainmen (except where switch-tenders are stationed) this does not relieve other trainmen of responsibility. Enginemen should see that the switches nearest the engine are properly set.

Switch should not be left open for a following train unless in charge of a trainman of such train. He should be at the switch to take personal charge and arrangements in advance to leave switches lined up at certain places or under certain conditions should not be permitted as it is a dangerous practice.

Never permit any person other than one of the train crew to open or close a switch, unless they are authorized to perform such duty. Conductors should so arrange their

work that they may be in a position where they can see that switch is properly set before leaving it.

In answer to a question as to the exact meaning of the word "responsible" in Rule 104 the Committee on Rules of the A. R. A., April 8, 1890, unanimously agreed that the conductor is the person to be held responsible for the proper use of the switches by himself or his trainmen, and that the word "responsible" should be taken in its true literal dictionary sense, viz., answerable, amenable, accountable.

After opening a switch to head in trainmen should take position on opposite side of track from the switch. In heading out, rear trainman should drop off on side opposite the switch, unless he is on the rear of the last car.

When clear of the main track waiting for a train, trainman should stand on opposite side of track from switch while train is passing.

#### **DEFECTIVE SWITCHES.**

If a rigid split switch is run through it is thereafter unsafe and must be protected. The switch must be spiked unless section foreman is on hand to take charge. When switch is spiked train crew should notify section foreman if possible to find him; if not, watch for him on the line and, if found, send him back immediately. Report should be made to Superintendent by wire at first opportunity, preferably at station where switch is located.

If an engine or car is run partially through a split switch, the entire movement should be continued to prevent derailment.

#### **PASSING TRAIN AT STATION ON DOUBLE TRACK.**

(Rule 106).

"Trains must use caution in passing a train receiving or discharging passengers at a station, and, except where proper safeguards are provided, or the movement is otherwise protected, must not pass between it and the platform at which passengers are being received or discharged."

When two trains approach a station about the same time the least important one should hold back a sufficient distance to permit the important one to do its station work first.

It is not good practice to pass a train receiving or discharging passengers at the platform even though you can pass on the outside track, as detained passengers are liable to cross the tracks at the rear of their train, in which case your approach may not be noticed until it is too late.

#### **CURRENT OF TRAFFIC (D-151).**

"Trains must keep to the \_\_\_\_\_ unless otherwise provided."

The rule leaves it optional with each Railroad to designate the direction.

"To the right" prevails on most Railroads. Conditions exist where it is necessary to number the tracks and direct trains of a specified direction to use No. 1 track and those in opposite direction No. 2 track, owing to the tracks crossing each other at various points and also where there are more than two tracks.

Trains, yard engines, or other engines moving about a yard must respect the current of traffic as specified in the rules, including those in the time-table, unless they receive a train order authorizing a reverse movement, or do so under protection. The responsibility rests with the train or engine moving against the current of traffic unless the train moving with the current of traffic disobeys stop signals or train orders.

#### **CROSSING OVER ON DOUBLE TRACK (D-152).**

"When a train crosses over to, or obstructs the other track, unless otherwise provided, it must first be protected as prescribed by Rule 99 in both directions."

The object of requiring protection in both directions on the track obstructed or to be used is owing to a possible movement of a train against the current of traffic by the Dispatcher in addition to the movement permitted by the Rules.

The fact should not be overlooked that the Dispatcher may move a train against the current of traffic at any time and such move does not in any way depend on trains on the opposite track.

Block Signals do not protect a train movement against the current of traffic; they only protect movements with the current of traffic.

#### **MOVEMENT BY TRAIN ORDERS.**

(Rule 201).

No information or instructions should be given in a train order unless it affects the direct movement of a train.

Dispatcher has authority under the second paragraph to vary from a prescribed form if there is not a form by which the movement may be made. Dispatchers should not abuse this portion of the rule, but apply it only in extreme cases, and then the order should be so worded as not to leave any room for doubt or misunderstanding.

In issuing an order not according to form, or in forming combinations of prescribed forms, Dispatcher should so frame the order that it will be clearly understood without punctuation marks. On every Railroad there should be a uniform system for issuing orders not prescribed by the forms, such as receipts from conductors and enginemen for new time-tables, Dispatchers' check of trains on train registers, orders at the meeting point and take siding or hold main track at meeting point.

#### **ISSUE ORDERS IN SAME WORDS TO ALL ADDRESSED.**

(Rule 202).

It is very essential that all orders be given in the same words to all employes or trains addressed and under no circumstances should an operator copy just that portion of an order effecting the movement of the train addressed at his station, neither should the Dispatcher instruct operator to drop out at a given point. Such practice has resulted in collisions.

#### **NUMBERING OF TRAIN ORDERS.**

(Rule 203).

When more than one set of Dispatchers are working on a Division, each set should use a different series of numbers, thereby preventing duplicate numbers for crews that run over more than one Dispatcher's territory.

Train orders should be numbered consecutively each day beginning at midnight. Where track orders are kept in a separate book the general practice is to number them consecutively for several months. As there are compara-



tively few track orders, beginning to number them at midnight and numbering only for one day would result in too many orders of the same number on different dates.

### **SENDING AND DELIVERY OF TRAIN ORDERS.**

(Rule 204).

Dispatchers should, in sending orders, first indicate by office call or station name the station to whom the address following is to apply.

A copy for each person addressed must be furnished by the operator and it should be understood that this applies to 19 or 31 form orders relative to slow track, receipts for new time-tables, or any information issued upon such forms.

Messages should under no circumstances be written on a train order form.

Orders addressed to operators restricting the movement of trains, such as hold orders under Form J, or orders issued under the third paragraph of Rule 208 must be respected by conductors and enginemen the same as if addressed to them.

Orders should not be addressed to "All Concerned" as it is too indefinite. They should be addressed to the particular train or trains, or to "All \_\_\_\_\_ Trains", to "All \_\_\_\_\_ Trains except \_\_\_\_\_", to "\_\_\_\_\_ Class Trains", to "Extras \_\_\_\_\_", to "Trains Originating at \_\_\_\_\_", "to" \_\_\_\_\_ via \_\_\_\_\_.

Where there are two or more routes out of a station in the same time-table direction a route should be designated when addressing orders to "all trains" in that direction.

When there is a motorman instead of an engineman on the train, orders should be addressed to "C&M" instead of "C&E".

### **DISPATCHER'S TRANSFER.**

(Rule 205).

A uniform system of placing train orders in the Dispatcher's book and system of checking expired orders should be adopted on each system. All Dispatchers should check uniformly.

If a proper system is adopted a transfer from one Dispatcher to another is not absolutely necessary. However,

if a transfer is desired it should contain only the numbers of unexpired orders properly dated, addressed, timed and signed by Dispatcher going off duty. It should also be signed by the relieving Dispatcher.

A log or general information book may be used but should be separate from the train order book in which transfers are made. The practice of making skeleton transfers is dangerous, unnecessary and obsolete.

### **DESIGNATION OF TRAINS IN TRAIN ORDERS. IDENTIFICATION BY ENGINE NUMBERS.**

(Rule 206).

The Standard Rules permit the use of engine numbers as identification of regular trains, if desired. Many railroads require that engine numbers be designated, even though trains are equipped with indicators. However, there are times when it is impossible to give the engine number; for example, if a Dispatcher helps an inferior train against a superior train before the superior train leaves its initial station, or when designating a train in an order by its schedule number, and there are sections, it would be impracticable to give the engine number.

In train orders regular trains must be designated as "No. 10" and sections as "Second 10".

In designating extras by their engine numbers, the direction must be given as "east" or "west", "north" or "south". This includes the address as well as the contents of the order. If an order is addressed to an engine no direction is required, but after having once been created an extra by issuance of running orders, the direction must always be given.

In case of a double-header extra the American Railway Association recommended Sept. 24, 1900, that the number of the leading engine should be designated in the order, but this is not always practical as helpers are sometimes coupled on the head end at intermediate stations to help short distances, so if the engine designated in the order is in the train it would seem sufficient, provided the train indication, if any, corresponds therewith.

It is a practice on some railroads to indicate the time in both words and figures, and the same is authorized by

the Standard Rules when train orders are transmitted by telegraph. However the designation of time in words is not compulsory under the Standard Rules.

Train and engine men should be careful to read closely the time shown in both words and figures, when both are used, and not read the figures only.

"In transmitting train orders by telephone the names of stations must be plainly pronounced and then spelled, letter by letter, thus: Aurora, A-u-r-o-r-a; all numerals must first be pronounced and then followed by spelling, thus: 1-0-5, O-n-e N-a-u-g-h-t F-i-v-e; the Train Dispatcher must write the order as he transmits it and underscore it as it is being repeated. The letters duplicating names of stations and numerals will not be written in the order book nor upon train orders. Even hours must not be used in stating time of day in train orders, such as 10:00 A. M."

Operators, and train and engine men, when receiving orders at a point not a train order office or at one which has been closed, should repeat orders in the same manner as sent by Dispatcher.

#### **DESIGNATE FORM NUMBERS AND COPIES REQUIRED.**

(Rule 207).

~~Unless~~ If only one form of order is in use, Dispatcher should always designate the form number as "19" or "31" preceding the sending of an order, together with the direction and number of copies that are required. In issuing an order under Form J (holding order) the Dispatcher should designate as closely as possible the number of copies required, as all conductors and enginemen of trains held must be delivered a copy of the operator's order. They should also be given a copy of the annulment of the hold order or an order permitting train to go, provided they have all other necessary authority.

The following note appears under Rule 207:

"Where Forms '31' and '19' are not both in use the signal may be omitted."

#### **COPY OF ORDER TO OPERATOR AT WAITING OR MEETING POINT.**

##### **Transmitting of Orders Simultaneously.**

(Rule 208).

A train order to be sent to two or more offices must be transmitted simultaneously to as many as practicable and the practice of adding to an order after it has been repeated is bad. The rule states that the several addresses must be sent in the order of superiority of trains, each office taking its proper address. This, however, is not always practicable as an order may be addressed to a superior train and an inferior train at the same office, owing to combinations that are necessary in issuing orders; for example, a meet is to be made between No. 1 (a westward train) and an extra west with No. 2, an opposing train, at B. The order must be first addressed to No. 1 and this will include the extra west. When repeated by the office first addressed it is then in effect and a hold order to the extra west before it has been repeated or X response sent by the operator who holds the order for No. 2. In case of circuit failure operators sometimes take it upon themselves to complete orders for the Dispatcher, which is a violation of the rules. Suppose the operator who holds the order to No. 1 and the extra west should complete the order, owing to it having been repeated. The extra west would then be moving against No. 2 and No. 2 not held by the order. Should an operator assume such responsibility, he alone would be responsible for an accident caused thereby. It might be safe for an operator to complete such orders as track orders, annulment of schedules, an order restricting the train addressed (provided the same order does not confer right upon it), or a time order to wait or run late when such time order is addressed to the train that is to wait or run late, but not to the inferior train.

If an operator held an order helping a train to his station against the superior train, and the train so helped had arrived, it would be good judgment to complete the order for the Dispatcher. When wires are working badly and circuit failure is anticipated, Dispatcher may instruct

the operator to complete orders for him, but such instruction should never be given as a future convenience. The possibility of circuit failure is one of best arguments in favor of the almost unrestricted use of the 19 form of train order.

When a meet or wait is made at an open train order office the order must, when practicable, be addressed to the operator at the meeting or waiting point. He must deliver copies of the order to all trains effected until all have arrived from one direction. For example: Nos. 1, 3 and 5 meet Nos. 2 and 4 at B. No. 1 arrives first, No. 2 second and No. 4 arrives third, each receiving copies. Then all eastward trains (even numbers) having arrived the order may be filed without delivering copies to Nos. 3 and 5, except that should such order be addressed to a train as well as to the operator as a middle order, it must be delivered to the train addressed regardless of it having become void as a middle order. These orders should, when possible, be issued to the operator on the 19 form. Should it become necessary to issue it on the 31 form, the operator should sign his name in the space where conductors are required to sign, transmit and obtain complete in the usual manner. The 31 middle order is then ready to be handled the same as if it were issued on the 19 form. Such orders when issued on either the 19 or 31 form must be respected by the conductor and engineman to whom delivered the same as if addressed to them.

When an order can not be sent to the several offices simultaneously it must be sent first to the superior train, as they must be held before the inferior train is permitted to act on the order.

The addressing of a wait order issued under Example 4, Form E, to an operator at the waiting point would seem impracticable, especially if there were many waits in the order. The Interstate Commerce Commission severely criticises the omission of the order to the operator at the meeting point and Dispatchers should comply strictly with the rule.

## TRANSMITTING AND WRITING ORDERS AND THE HANDLING OF 31 FORM TRAIN ORDERS.

(Rules 209 and 210).

Operators receiving train orders must write them in manifold during transmission.

"When a 31 train order has been transmitted operators must (unless otherwise directed) repeat it at once from the manifold copy in the succession in which the several offices have been addressed."

If the telegraph is used for transmitting orders and the Dispatcher abbreviates a word it should be so written. If he sends a word in full it should be written in full, and the order should be repeated to the Dispatcher exactly as it appears on the blank. The repeating of just that portion of an order effecting the train addressed at the particular station where received should not be permitted.

Operators should not connect words and figures by loops or lines, neither should they flourish or make unnecessary long lines or use circles for dots or crosses for periods. "Figures in train orders should not be surrounded by brackets, circles or other characters." Always keep in mind that the less there is in an order the safer it is. Many bad combinations can be created by mixing the writing on one line with the writing in the line above.

Orders should not be underlined, interlined, altered, scratched or erased in any manner. If a mistake is made have the order sent again and never change an order that has once been repeated.

Operators should not use indelible or black lead pencils for writing train orders as the soft points make poor under-copies and are hard to read, especially at night. Train and engine men take an order for what it appears to be and do not take an operator's peculiarities of penmanship into consideration.

In repeating orders operators should watch the copy closely and should not be looking at something else, merely taking an occasional glance at the order that is being repeated. After repeating a 31 train order the time of repetition should then be written on the order, taking the time from station clock or watch.

If the requisite number of copies are not made at the first writing, additional copies should be made from a copy previously made and the new copies repeated to the Dispatcher. The Dispatcher is not required to O. K. the original repeat as he must receive the first repeat before he can complete the order; it is however necessary that he O. K. the repeat of the new copies, otherwise the operator does not know that the Dispatcher has received it.

Referring to the original repeat the American Railway Association ruled Sept. 9, 1902, that it was not necessary for a dispatcher to give an operator "O. K." as an acknowledgement of the repetition of an order.

Those to whom a 31 form order is addressed must sign it, except the engineman, and in case it is addressed to the engineman without a conductor then the engineman should sign it in the place provided for the conductor's signature. If a 31 form order is addressed to an operator he should sign it in the place provided for the conductor's signature and the order completed in the usual manner. If an order is addressed to the conductor, engineman and pilot, the pilot as well as the conductor must sign in the conductor's column if blank does not provide a place for signature of engineman and complete must be written opposite each signature. If two or more signatures are sent to the dispatcher at one sending the complete must be written opposite each signature, although the sending of one complete is sufficient for all signatures sent. The complete must be dittoed or written diagonally across the lines on which the signatures appear. After each complete the operator must sign his last name, but not until complete has been received and written on the order.

In sending signatures to 31 form orders to the Dispatcher same should be preceded by the order number and followed by the train number. The Dispatcher will, when ready to complete the order, give the word "complete" (which may be abbreviated "com"), the time and the initials of the official authorized to sign train orders.

The American Railway Association leaves it optional with each Railroad to designate by whom train orders will be signed.

A copy of each 31 form order must be delivered to each employe addressed except the engineman (unless addressed to him alone) and his copy must be delivered personally by \_\_\_\_\_. (This service is generally left to the conductor to perform.)

An engineman should never be permitted to sign a conductor's name to an order, nor should a conductor be permitted to sign a helper engineman's name to an order addressed to the helper engineman even though they are to help his train.

Operators should not transmit a conductor's name to a 31 form order before he has obtained signature, neither should he put the complete or any part of the complete on an order before the Dispatcher sends it. The practice of sending signatures to 31 form orders and getting the complete in advance of the signature of the conductor has caused a number of collisions.

The American Railway Association states that, if preferred, each person receiving an order may be required to read it aloud to the operator.

One person reading an order to another is not good practice. Every person to whom an order is delivered should be required to read it for himself, as the reading by one person to another is often misunderstood and the wrong impression obtained. The reading of an order by an operator who wrote it is certainly superfluous, as it would be a poor operator who could not read his own order. Furthermore, the operator is not the one who must execute the order.

"Enginemen must show their train orders to firemen and, when practicable, to forward trainmen. Conductor must show train orders when practicable to trainmen."

When typewriter is used for train order work a large, plain style of type should be used. An operator should be particular to keep type clean. If the top copy should be cut owing to striking the keys too hard, that copy should not be delivered. Operators should not be permitted to use typewriter for copying train orders until they are known to be efficient typists.

Operators should preserve the lower copy of all orders. However, when the top copy is torn by stylus, or cut by



the type, it might be preserved provided the lower copy is a plain one, but the Standard Rule requires the preservation of the lower copy.

The following note appears below Standard Rule 210:

"On Railroads where the signature of the engineman is desired, the words 'except enginemen' and the last sentence in the second paragraph may be omitted. If preferred, each person receiving an order may be required to read it aloud to the operator."

In answer to a question as to who should fill in the "Train Number" opposite signatures of 31 form orders the Committee on Train Rules Feb. 23, 1905, stated that it was their opinion that the conductor when he signs the order should indicate the train he is running in the space provided for the purpose. This should also apply to enginemen in case there is no conductor with the train.

### 19 FORM TRAIN ORDER.

(Rule 211).

The use of the 19 form is not restricted by the Standard Rules. However, some Railroads prohibit its use for restricting the superiority of a train.

There has been and no doubt is yet considerable prejudice against the 19 form order. This is generally caused by not thoroughly understanding the difference between the 31 and 19 forms so far as safety is concerned.

~~With perhaps one exception, the 19 form is equally as safe as the 31 form.~~ With a proper clearance made for the purpose and a few restrictions placed upon its use, it is equally as safe and certainly is by far the best order for the prompt movement of trains.

When a 19 form order is received, comply with it because it is just as safe as a 31 form. It is the one you never receive that may cause an accident—not the one you get.

If an operator holds one restricting order on the 31 form he can overlook it and clear the train as easily as if it was on the 19 form. If he holds three restricting orders on the 31 form he can overlook all three of them as easily as if they were on the 19 form, the only difference being the possibility of overlooking some restricting orders

and delivering others. If the orders were on the 31 form, the Dispatcher would have an opportunity to call his attention to those orders to which operator may have failed to send signatures as he is held equally responsible with operator in such cases. This objection can be eliminated by adopting the proper form of clearance. The only difference between the 19 form order and 31 form order is that the 31 form order must be signed by the employees addressed except the enginemen, and the 19 form order does not require such signatures.

19 form orders must be delivered personally by the operator unless it will take him away from the immediate vicinity of his office, then the engineman's copy may be delivered by the conductor or other employee so authorized by the rules.

If an order issued on the 19 form restricts the train addressed at point where same is to be received by them the operator must bring the train to a stop before making the delivery. The object of this is to avoid the train running by the switch at which an inferior train may be heading in before the inferior train is clear. If the 19 form is delivered to the train as it passes engineman may not stop until he reads the order and it may then be too late to prevent an accident.

A train may be restricted with Form C (right order) or Form E (time order) as well as with Form A (meet order).

If an inferior train is given right (Form C) over a superior train to the point where the order is placed for the superior train, the superior train should be stopped before delivery is made, unless the time of opposing train will permit it to make the next station and clear opposing train holding right, in which case it would be safe to deliver without stopping the train as opposing train would not be due out of next station ahead, thus saving a delay.

A time order restricts until time has expired at the station named after which time the 19 form order may be delivered without stopping the train.

## USE OF 19 FORM TO RESTRICT SUPERIORITY OF TRAINS.

The use of the 19 form train order to restrict the superiority of trains is now in effect on several large Railroads and has by actual practice proven to be not only as safe as the 31 form order, but has eliminated delay and accidents caused by stopping and starting heavy trains.

If its use is restricted to the conferring of right, as is the practice on many railroads, such rule will first have to be modified to permit of its use for the restriction of trains (provided order numbers shown on clearance cards are checked by the Dispatcher) except in the following cases, when the 31 form order should be used.

(1) If necessary to know positively that the superior train has actually received the order before completing it to the inferior train when it confers right on the inferior train to a point beyond that at which the order is placed for the superior train.

(2) Where necessary to restrict a train at a point not a train order office or at one at which the office is closed as per last paragraph of Rule 217.

(3) When reducing a time order.

(4) When receipting for a new time-table.

(5) When restricting a train that has been cleared or of which the engine has passed the train order signal.

(6) When restricting a work extra when such work extra is within the territory where order restricts.

"When a 19 form train order restricting the superiority of a train is issued for it at the point where such superiority is restricted, the train must be brought to a stop before delivery of the order."

Operators should fill out clearance card, designating thereon numbers of all orders (19 and 31 forms), repeat to Dispatcher train and order numbers and will obtain an O. K. with the time and \_\_\_\_\_ initials, writing same as sent by Dispatcher in space provided on the clearance card.

As operator repeats clearance card with train and order numbers Dispatcher will write same in his train order

book and, if the numbers of all orders for the train have been repeated, Dispatcher may then transmit the O. K., time and \_\_\_\_\_ initials, indicating the time in train order book.

Conductors and enginemen must carefully check the orders received with the numbers designated on the clearance card and, if all are not received, stop at once and obtain them. Train order offices should be approached at a moderate rate of speed. Conductors and enginemen must know contents of orders received before passing fouling point at which an inferior train would take siding.

Form \_\_\_\_\_

### CLEARANCE CARD

STATION \_\_\_\_\_ 191 \_\_\_\_\_

Conductor and Engineer No. \_\_\_\_\_

ORDERS FOR YOUR TRAIN ARE { FORM "19" \_\_\_\_\_  
FORM "31" \_\_\_\_\_

(If no orders form "19" or "31" endorse "NONE" in space provided for order numbers.)

O. K. at \_\_\_\_\_ M. \_\_\_\_\_

Do not leave before \_\_\_\_\_ M.  
(Fill in this line only when necessary to comply with Rule 221)

Issued by \_\_\_\_\_ Opr. at \_\_\_\_\_ M.

Conductors and Enginemen must each have a copy and see that their train is correctly designated in the above form, also see that the numbers of all train orders received correspond with numbers inserted above.

Operator must retain a carbon copy.

Clearance must be filled out by the Operator before repeating train and order numbers to the Dispatcher.

After receiving O. K. from the Dispatcher no additions must be made, but a new clearance issued.

If the 19 form is authorized for the restriction of the superiority of trains where not protected by block signals, then the 31 form should be used when the superiority of a train is restricted and the order issued for it at a point where such superiority is restricted.

The six restrictions placed on the use of the 19 form order apply to the Dispatcher and should not be considered by conductors, enginemen or operators.

It may become necessary to give the inferior train right over the superior train to a point beyond the train order office where the superior train receives the order. The 19 form order may be used provided the clearance with the order number thereon has been O. K'd by the Dispatcher

and he has been advised of the delivery of the order or receiving report from receiver operator of departure of train. The order may then be completed to the inferior train.

#### **ACKNOWLEDGEMENT BY X RESPONSE.**

(Rule 212).

When directed to do so by the Dispatcher, operator may before repeating the entire order send the X response, responding "X", number of order, to whom addressed and the initials of his name and office signal, after which the train order becomes a hold order, but must be repeated before complete can be given and order delivered. The order number should be preceded by the form number. After sending the X response, the operator must write the time it was sent on the order, together with his initials (not his private sign or last name).

If not directed to send the X response the order must be repeated in the usual manner. The object of sending the X response is to permit the movement of the inferior train at the earliest possible moment.

If the X response portion of the order blank is not filled in by the operator, it indicates that it was not X'd, but this does not concern conductor or engineman.

#### **COMPLETING AN ORDER.**

(Rule 213).

When issuing orders they should be addressed to the superior train first as required by Rule 208. Dispatchers must in every case have the acknowledgment from the operator holding the order for the superior train, either by the operator sending the X response or, by repeating the order before he completes same to inferior train. Should the order be completed to inferior train before it becomes a hold order to superior train, even though it is only for a moment it would be a lap order.

Where the various forms are combined, as is the general practice, Dispatcher should be particular to know that he has the acknowledgment from every operator who has the order addressed to a superior train.

#### **WHEN AN ORDER IS IN EFFECT OR BECOMES A HOLDING ORDER.**

(Rule 214).

"When a train order has been repeated, or 'X' response sent, and before 'complete' has been given, the order must be treated as a holding order for the train addressed, but must not be otherwise acted upon until 'complete' has been given."

The above applies to either the "19" or "31" form. An order issued on the "19" form is just as much a holding order after the "X" response has been sent or the order entirely repeated and before "complete" has been given as a "31" form order. No "O. K." or any response whatever is necessary. The act of the operator in sending the "X" response or repeating the order makes it a hold order, and the operator must hold the train until the balance of the order can be repeated (if only X'd) and completed, and then make the delivery.

If an order that has not been "X'd" has only been partly repeated it is not a hold order and Dispatchers and Operators should be particular to know that all of the order including the signature of \_\_\_\_\_ has been repeated. Advising conductors and enginemen that the circuit has failed and "complete" cannot be obtained in no way facilitates the movement of the train so far as the order is concerned. They have no right to act on an order that is not complete.

"If the line fails before an office has repeated an order or has sent the "X" response, the order at that office is of no effect and must be then treated as if it had not been sent."

#### **DELIVERY OF ORDERS BY DISPATCHER.**

(Rule 216).

When it becomes necessary for Dispatcher to deliver orders to trains at his office, such orders should be copied through the manifold on the leaf of the order book before they are sent to other trains, or copied in the same manner from the first operator repeating.

Delivery of orders personally by the Dispatcher is not good practice. A separate office should be provided and the operator required to handle orders the same as at other stations.

**DELIVERY OF ORDER AT POINT NOT A TRAIN  
ORDER OFFICE OR AT ONE AT WHICH  
THE OFFICE IS CLOSED.**

(Rule 217).

Such orders must be addressed to C&E \_\_\_\_\_ (at \_\_\_\_\_), care of \_\_\_\_\_, or to Engineer \_\_\_\_\_ (at \_\_\_\_\_), care of \_\_\_\_\_ and if it is not definitely known at what station the train is located it may be addressed to C&E \_\_\_\_\_ between \_\_\_\_\_ and \_\_\_\_\_.

The order may be sent in care of a conductor or other employe but never in care of both conductor and engineman.

The order must be signed and completed if a 31 form, and completed if a 19 form, to the employe in whose care it is sent, and delivered as addressed, taking signatures if a 31 form, of both conductor and engineman and pilot, if any, on one copy and deliver it to the first accessible operator. If a 19 form order is used, after the delivery is made to those addressed the operation is complete.

When a 31 form order is delivered to an operator the signatures of those to whom delivered must be sent at once to the Dispatcher and then placed on file.

When a 19 form order is sent to a train in this manner, the employe in whose care it is sent must deliver the order, stopping if necessary to do so. Dropping it off as train passes is not good practice because of the liability of its being lost. Failure on part of train to receive an order sent them in this manner is equivalent to non-delivery of an order by employe in whose care it is sent.

The complete received by the employe in whose care the order is sent is sufficient for the train addressed and they should act on it the same as if completed in the regular way.

If the Dispatcher desires to restrict a train that is at a point not a train order office, or one that is closed, a 31 form order must be used and the order must not be completed to the inferior train until the signatures of the conductor and engineman of the superior train have been received.

It may become necessary to send an order to a train in care of a signal maintainer, section foreman or other responsible person, in which case the same procedure would apply as if sent in care of a conductor or engineman.

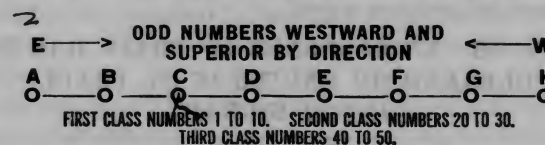
**WHEN A TRAIN IS NAMED IN AN ORDER BY  
SCHEDULE NUMBER ALONE, ALL  
SECTIONS ARE INCLUDED.**

(Rule 218).

When a train is named in a train order by its schedule number alone (whether engine number is given or not) all sections of that schedule are included, and each must have copies delivered to it (A. R. A. Ruling Oct. 5, 1915).

If the section is stated then it is not named by its schedule number alone.

If an inferior train receives an order to meet an opposing superior train and such train is designated by its schedule number alone (as No. 1) all sections are included the same as if each and every section was specified.



Should No. 2 (inferior) receive an order to meet No. 1 at C and it finds the first section of No. 1 at B, No. 2 may proceed to C for the remaining sections.

Should No. 2 (inferior) receive an order to meet First 1 at C and it finds the first section at B, No. 2 must remain at B for all following sections of No. 1 for the reason that after meeting the first section of No. 1, No. 2 could not then move against the second section which is superior.

If No. 1 (superior) receives an order to meet No. 2 at C it must meet all sections. Should First 2 go to D under flag or otherwise, No. 1 may proceed to C owing to its superiority over No. 2 and remain at C for the remaining sections. Should No. 1 (superior) receive an order to meet First 2 at C and it finds First 2 at D, No. 1 may proceed on its run paying no more attention to sections of No. 2 as No. 1 is superior to all sections after meeting the first.



Sections must run in numerical order. When an intermediate section is withdrawn the following sections must close up.

Under no circumstances may a second or following section pass a first or leading section and run ahead of it, as the second ahead of the first.

If No. 2 (inferior) receives an order to meet First 1 at C and First No. 1 goes to B under flag or otherwise, then the following sections of No. 1 may follow, but must not pass the first section. No. 2 must remain where it meets the first section. If First 1 goes to B it must flag No. 2 and notify it, also send out a flag to the rear a sufficient distance to stop Second 1 and prevent it from striking No. 2 on the main track between switches at B as neither No. 2 nor Second 1 know that they are to meet at B.

When a train flags from its train order meeting point it must protect all openings caused thereby, but should not flag except in extreme cases.

**REPEAT OR "X" RESPONSE IF TRAIN HAS BEEN  
CLEARED OR ENGINE IS BY TRAIN  
ORDER SIGNAL.**

(Rule 219).

"An operator must not repeat or give the "X" response to a train order for a train which has been cleared or of which the engine has passed his train order signal until he has obtained the signatures of the conductor and engineman to the order."

When a train has been given a proceed train order signal or a clearance card clearing it on the train order signal, or a clearance card at a train order office where there is no train order signal, the order must not be repeated or "X" response sent until the signatures of the conductor and engineman have been obtained.

If the normal position of the train order signal is "stop" and the train has been cleared with a "proceed signal", whether the engine is by the signal or not, operator must not repeat or give the "X" response until the conductor and engineman have signed the order.

Once the operator displays the "proceed signal" he

must consider the train cleared and not depend on holding them by placing the signal at "stop" before engine passes it. If the signal is placed at "stop" before engine passes it, after having once indicated "proceed", it must be respected as a stop signal and conductor and engineman would not be relieved of any responsibility owing to having once received the "proceed signal".

If "stop" is displayed for a train, when it arrives and no clearance has been issued, an operator may repeat or give the "X" response to orders for the train without further notice as the fact that the signal was at "stop" when the train arrived is sufficient notice that there are orders for them. It matters not whether there is one order or a dozen—the responsibility then rests with the conductor and engineman.

**HOW LONG TRAIN ORDERS ARE IN EFFECT.**

(Rule 220).

"Train orders once in effect continue so until fulfilled, superseded or annulled. Any part of an order specifying a particular movement may be either superseded or annulled."

It makes no difference how many orders you may have. All must be respected as long as they are in effect. One order may for the time being prevent you from fulfilling another.

An order is fulfilled by obeying it.

An order is annulled by issuing another order stating "Order No. \_\_\_\_\_ is annulled" or "That part of Order No. \_\_\_\_\_ reading \_\_\_\_\_ is annulled."

An order is superseded by stating that a train will do a certain thing "instead of" what it was previously required to do. (See Superseding of an Order).

"Orders held by or issued for or any part of an order relating to a regular train become void when such train loses both right and schedule as prescribed by Rules 4 and 82, or is annulled."

When a train loses both right and schedule as prescribed by Rules 4 and 82 at any point, all orders held by that train become void. All orders addressed to a train at any station, provided the train's schedule becomes more

than 12 hours late on its leaving time at such station, becomes void. Should an order be also addressed to other trains it would have no effect on the order for other trains addressed, and only that part of the order pertaining to the train which has lost both right and schedule would be void.

If a schedule is annulled, all orders held by or issued for the train authorized by such schedule (only within the territory where annulled) become void in so far as they refer to that train.

When an order becomes void under the rules there is nothing to annul. The operator should be careful to know the time of the schedule at his station, and that it is more than 12 hours late by the correct time, before filing. If the order is addressed to other trains it must only be considered filed to the train annulled, and not actually placed in the file until it has been delivered to all other trains addressed.

The annulling of a schedule over the entire run or part thereof only effects orders or that portion of an order directly concerning such train and in no way changes the status of other trains with respect to portions of the order applying to them,

"When a conductor or engineman (or both) is relieved before the completion of a trip, all train orders and instructions held must be delivered to the relieving conductor or engineman. Such train orders or instructions must be compared by conductor and engineman before proceeding."

This is an important duty and conductors and enginemen should be careful that nothing is overlooked, always keeping in mind that the responsibility rests entirely with them.

#### **TRAIN ORDER SIGNAL.**

(Rule 221 "A" and "B").

The Standard Rules give the choice between two systems of handling Train Order Signal.

(1) Normal position "Stop" when there is an operator on duty.

(2) Normal position "Proceed" to be placed at "Stop" when trains are to be stopped for train orders.

Both rules state that a fixed signal must be used at each train order office. There are good reasons why a fixed signal should not be used at some train order offices; for example, at initial stations where the office is located some distance from the main track and at stations where there is a fine station building and a place where all trains stop, and it is not desired to decorate the building with the average style train order signal when it is not necessary and does not add to the safe movement of trains.

#### **"A"**

"A fixed signal must be used at each train order office, which shall indicate 'stop' when there is an operator on duty, except when changed to 'proceed' to allow a train to pass after getting train orders, or for which there are no orders. A train must not pass the signal while 'stop' is indicated. The signal must be returned to 'stop' as soon as a train has passed. ~~It must be fastened at 'proceed' only when no operator is on duty.~~"

Under this rule, after a train receives orders it may proceed if the operator displays signal in proceed position.

At night after the engine of a train passes a train order signal the engineman can not observe its position, although the entire train has not passed the signal (see definition of train). If the engine is not permitted to pass the train order signal at stop it would in many cases be impracticable. A train may be given a "proceed" signal even though the operator has orders for other trains in the same direction. Considering the unreliability of information received by operators and the possibility of one train passing another at a point not a train order office, or one at which the office has been closed, this could hardly be considered safe practice, except perhaps on double track. If the signal can be fastened at "proceed" only when no operator is on duty, then when a train is to be given a "proceed" signal it is necessary that the operator hold the signal in that position until entire train passes. There is nothing to indicate to engineman and conductor that an office is closed other than the fact that the signal indicates "proceed". If the semaphore governing train movement in opposite direction indicates

"stop" that could in the day time be considered sufficient to denote an open office, but how is a train to be governed at night under conditions that the opposite semaphore can not be seen?

It is just as necessary to reply "stop displayed" under 221-A as it is under 221-B.

**"B"**

"A fixed signal must be used at each train order office, which shall indicate 'stop' when trains are to be stopped for train orders. When there are no orders the signal must indicate 'proceed'. When an operator receives the signal '31' or '19' followed by the direction, he must immediately display the 'stop signal' for the direction indicated and then reply 'stop displayed' adding the direction, and until the orders have been delivered or annulled the signal must not be restored to 'proceed'. While 'stop' is indicated trains must not proceed without a clearance card Form (A)."

The operator must, as soon as he receives the signal "31" or "19" with the direction, reply "SD", and this must be done before the order is sent, not as each operator repeats the order or sends the "X" response.

If the operator has orders for a train and he wishes to clear a train running ahead of it, for which he has no orders, he will have to do so by giving them a clearance card.

"Operators must have proper appliances for hand signaling ready for immediate use if the fixed signal should fail to work properly. If a signal is not displayed at a night office, trains which have not been notified must stop and ascertain the cause and report the facts to the \_\_\_\_\_ from the next available point of communication."

Where the semaphore is used except within manual block territory the arm indicates "stop" when horizontal and "Proceed" when in a vertical or diagonal position. Diagonal means above or below the horizontal. When trains pass a train order signal at "Proceed" by using a track other than the main track, conductor or engineman, if no conductor, should be required to obtain a clearance card or report to the operator before proceeding.

In the Standard Rules the following note to Rule 221 (A) appears: "The conditions which effect trains at stations vary so much that it is recommended each Railroad adopt such regulations supplementary to this rule as may best suit its own requirements."

Also note to Rules 221 (A) and 221 (B): "The Committee has recommended two forms of Rule 221, leaving it discretionary to adopt one or both of these forms according to the circumstances of traffic."

**THE NORMAL POSITION OF TRAIN ORDER SIGNAL  
"STOP" AS USED BY MANY RAILROADS.**

(Not Standard).

When an operator is on duty the normal position must indicate "stop", both semaphores at "stop" by day and in addition a red light at night. The absence of the light at night offices is a signal to stop. Some Railroads require a green light to be displayed in train order signal at night when the office is closed as a station marker. It is also a safeguard in case an operator is called during the night when an office is supposed to be closed, and the light should fail after receiving an order. If the green light, or "proceed signal" is not displayed the train is required to stop, examine position of semaphores and, if both indicate proceed, relight the signal lamp if possible and proceed, reporting same from next point of communication.

When engineman comes in view of train order signal, he is required to call for it by four short sounds of whistle, and, if operator has no order for his train, or any other in the same direction, a "proceed" signal will be given and same answered by two short sounds of the whistle. Some Railroads permit the operator to display a proceed signal any time after the engineman sounds whistle for the station in order to eliminate whistling.

When a train order signal is out of order trains should be notified and the operator must display a red flag by day and a red light by night, removing same when called for if no orders for the train or other trains in the same direction, and display a green flag by day and a green light by night. After rear of train has passed, again display the red signal.

In some cases the office hours are designated in the time-table so train and engine men may determine when office is closed. Others permit the display of both semaphores at "proceed" to indicate a closed office at any hour, either day or night, to which there is some objection.

To determine whether an office is closed engineman and conductor must see both semaphores at proceed at night and, in addition, a green light if one is required. The light may be seen but it is not always possible to see the semaphores. The light indicates position of only one semaphore.

In the regular manner of handling a train order signal operator frequently indicates a closed office under this rule when in reality it is not closed. This is done by indicating "proceed" for a train that takes the siding and then indicating "proceed" for a train in opposite direction or vice versa. Should a third train approach before the operator places one or both semaphores to "stop" position the office is closed to that train and they may proceed.

When it is known that one train is to pass another, the operator should not clear the train to be passed with the semaphore, but use a clearance card, keeping signal in "stop" position for the following train that is to pass it.

#### STANDARD CLEARANCE

FORM A.

NAME \_\_\_\_\_

COMPANY.

**CLEARANCE CARD**

Dover 9 15 A M November 17 19 15

Conductor and Engineman No. 12

I have 3 No No further orders for your train.

Stop signal is displayed For Extra 452 Cannot be Cleared

Block Clear

John Jones Operator.

This does not affect any orders you may have received.  
Conductor and Engineman must each have a copy, and see that their train is correctly designated in the above form.

Where Clearance Card, Form A, is used when the block is not clear, the line giving block indication will be left blank, and Permissive Card, Form C, used in addition to Form A.

(See Rules 331 A, 331 B and 362.)

Railroads which do not use Form A in connection with block signals may omit reference thereto in this form.

The Standard Clearance provides for the total number (not each number) of orders to be shown and conductors and enginemen are responsible for the receipt of that number addressed to them. If more or less, train should be stopped and clearance corrected. The provision "signal is out for" would seem to be of no apparent value under present day practices. Train men do not care what the signal is displayed for provided it is not for them. If clearance is received addressed to their train, that is evidence signal is not displayed for them. Why should it be necessary for an operator to explain to a conductor and engineman that signal is displayed for some other train?

If no orders, "no" should be written in the space following "I have".

If train has once been cleared and it becomes necessary to clear them again, the words "no further" should be written in the space following "I have".

#### AUTHORIZATION OF TRAIN BY CLEARANCE CARD.

At initial stations where regular trains are by Special Rule required to obtain a clearance card before leaving, such clearance card authorizes the train to run on the schedule designated thereon. If it is desired to start a train from any station other than its initial station it should be authorized by train order:

Eng. \_\_\_\_\_ run as No \_\_\_\_\_ to \_\_\_\_\_.

#### ORDER OR CLEARANCE CARD TIMED, DATED AND COMPLETED BEFORE MIDNIGHT DELIVERED AFTER MIDNIGHT.

An Order or Clearance Card timed, dated and completed before midnight may be accepted after midnight and should be respected the same as if issued on date of departure of train.

A. R. A. Ruling Sept. 9, 1902.

#### "OS" RECORD OF TRAINS.

(Rule 222).

"Operator must promptly record and report to the \_\_\_\_\_ the time of departure of all trains and the direction of extra trains. They must record the time of arrival of trains and report it when so directed."



Where train registers are provided, the conductor, or engineman if no conductor, registers time of arrival and departure. However, the operator should use the correct time of arrival and departure if time on the register is not correct. The rule only requires the time of arrival to be given when directed, when in fact it is always required and should always be given.

### **OPERATOR'S TRANSFER.**

(Not Standard).

A form and record for operator's transfer is left by the American Railway Association to the judgment of each Railroad to be determined according to the circumstances governing its operation.

The making of a written transfer when one operator is relieved by another in person is of vital importance. It is not only a protection to the Company, but to the operators and, above all, a greater protection to the public.

A suitable transfer book should be provided at each office where it may be necessary to transfer from one operator to another with provision made to indicate the numbers of all outstanding or undelivered orders, overdue trains if any, and trains that may have been cleared and are still in the yard. The transfer book should not be burdened with other information. Provision should be made for both the relieving operator and the operator relieved to sign their names as a receipt to one and a release to the other, giving time and date that transfer is made. The outgoing operator should be held responsible until his transfer is signed as acceptance by the operator relieving him, but should not be signed until all orders listed thereon are checked. The relieving operator should refuse to go on duty until such transfer is received.

In case of failure of one to make the required transfer, or the other refusing to accept a transfer, the matter should be immediately taken up with the Chief Train Dispatcher.

Should it become necessary for operators to relieve one another for lunch, or any short period of time, a transfer should be made the same as if relieving for the day.

If there are no orders or overdue train to transfer, the record should so state and must be handled in same manner as if there were orders.

When an operator is required to work with two or more Dispatchers and it becomes necessary to transfer the work on one portion of the road to another operator, a transfer should be made.

The operator holding the transfer should not under any circumstances permit another operator to assist in the handling of train orders or permit any person to clear trains with train order signal or clearance card until he has accepted a transfer.

When there is a space of time that the office is closed between the hours of two operators, it is the same as closing an office when there is only one operator.

The office should not be closed when there are orders on hand, except in cases where only track orders or annulments have been placed; for example, at the end of branch lines to be delivered only to trains leaving during the office hours, or when there are two tricks with a space of time the office is closed the operator may, on instructions from Dispatcher, leave a transfer with the track orders or annulments for the other operator coming on duty later.

### **MANUAL BLOCK SYSTEM.**

The Manual Block System is additional to and does not supersede the superiority of trains, nor dispense with the use or observance of other signals.

The train order signal in addition to being used for train orders is also used to block trains and generally indicates three positions—STOP, CAUTION and PROCEED—normal position STOP.

Block stations at both ends of a block should be connected by a local block wire.

When proceed is indicated a train may proceed to the next block station provided it has authority by right or schedule. When caution is indicated by card or signal, train must proceed under control to next open block station with the understanding that the block is occupied by a train moving in the same direction.

The manual block may be operated under any of the following four systems:

- (1) Absolute block for following and opposing movements on the same track.
- (2) Absolute block for opposing and permissive block for following movements on the same track.
- (3) Absolute block for following movements (double track).
- (4) Permissive block for following movements (double track).

Snow plows, wedge plows, rotaries and flangers including engines equipped with flangers in service should be moved only under a positive block.

Proceed signal must only be given when authorized by Dispatcher except in case of circuit failure, then if block is clear of opposing trains and operator at opposite end of block is instructed to hold opposing trains, assuming that local block wire is intact, operator may space trains ten minutes apart restricting them with a caution card with notation thereon "circuit failed".

The approach of trains should be reported to the Dispatcher as early as possible who will give instructions regarding their movement, either stop, caution or proceed as requirements demand.

Operators must observe markers of all trains. Should a train pass without markers, the fact must be reported at once. If markers are displayed after the rear end has passed the train order signal ———— feet (generally 300 feet) operator will place signal at stop and report train promptly to Dispatcher stating whether it is on the main track or siding.

If necessary to pass a stop signal to take the siding, or pull by on the main track to meet a train or do station work, permission must first be obtained from the signalman, but this would not relieve train and engine men from properly protecting themselves when necessary. After passing a stop signal, train must not proceed without a clearance card.

When clear of the main track at meeting or passing points, conductor must report promptly to signalman and

should not again occupy main track without first obtaining authority from the signalman.

To avoid delay to a following passenger train, inferior train should clear in time to prevent holding the passenger train at the last open block station in the rear.

Work extras must clear and report in time to prevent delay to passenger trains from either direction.

A train, having passed beyond the limits of a block, must not back into that block without permission from the signalman, or without proper flag protection when required.

On double track, unless otherwise provided, trains should not cross over or return until permission is obtained from the signalman and the movement fully protected in both directions as per Rule 99, when required.

When taking siding at a closed block station or at a siding where there is no block signalman conductor, should report clear to the Dispatcher by telephone and before proceeding obtain a clearance. If circuit fails conductor will be governed in the same manner as an operator insofar as it is possible to do so.

Freight trains going to such closed stations or sidings to meet freight trains should obtain a caution card at the nearest open block station to the meeting point; or, if to meet a passenger train, after freight train is into clear, it should report to the Dispatcher, before he will permit the passenger train which is to be met, to leave the nearest block station to the meeting point.

Some Railroads require that a passenger train be given a train order meet with an opposing passenger train in addition to the caution card.

Trains must not pass a stop signal without receiving a clearance, caution or permissive card, or a train order authorizing it to do so, neither should it proceed on a hand signal as against a block signal. Unless otherwise directed, when two or more trains have been coupled and move past any block station coupled; they must be separated only at a block station and the signalman notified.

Train parted signals must be given by engineman and signalman and answered in the usual manner. After

parted train has been recoupled the signalman must be notified.

A block station must not be considered closed, except as provided for by time-table or special instructions.

Operators should keep a block record sheet and be particular to make all entries thereon, including crossover movements and not depend on memory.

Copies of all clearance, caution or permissive cards should be filed.

**NOTE:** The foregoing are the general principles of operation under the Manual Block System. Rules for manual blocking vary to some extent on the various roads operating under it. The manual block system is becoming obsolete.

### **CONTROLLED MANUAL BLOCK SYSTEM.**

(Staff System).

The Controlled Manual Block System is so constructed as to require the co-operation of the signalman at both ends of the block to display a Clear or Permissive Block Signal.

The signals govern the use of the blocks, and unless otherwise provided, their indications supersede time-table superiority and take the place of train orders.

On single track, when from any cause a signalman is unable to communicate with the next block station in advance, or if the block signal apparatus fails so it can not be changed from the normal indication, he must set his signal and other apparatus so as to display their most restrictive indication, stop all trains approaching in that direction and be governed by instructions from the Superintendent. If he is unable to communicate with the Superintendent he may, after a train that has been authorized to use the block is clear of such block, permit regular trains to pass stop signal and proceed with caution or their time-table authority, expecting to find a train in the block, broken rail or switch not properly set. Other than this, the same principle applies as with the Manual Block System.

Where the staff system is used, a train must be governed by the signals "Head in," "Proceed on main track at speed," "Staff in position," "Proceed on main track"

prepared to stop before passing the staff crane, "staff not in position." The signals are so arranged and interlocked that signalman can not indicate "proceed on the main track" to two opposing trains at the same time. The normal position of these signals indicate "Head in."

When staff has been received, engineman must first ascertain if it authorizes a move in the direction of his train; if so, give whistle signal o—o to trainmen and proceed regardless of opposing trains.

When staff system is out of order trains must be moved by a train order giving them right over all opposing trains to the next block station as there is no time-table superiority within the staff limits.

A switching movement must only be made on authority of a staff for the block used.

### **RUNNING EXTRAS WITHOUT ORDERS ON DOUBLE TRACK.**

(Not Standard).

When, by special rule, extras are permitted to run on double track without running orders, it should be understood that such rule does not apply if a section of double track is singled by train order. An order to run extra must be obtained in this case regardless of the distance.

The special rules of some Railroads the authority to run extra on double track must be authorized by obtaining a clearance card before leaving specified points, on other Railroads extras are permitted to run without orders from and to any station by displaying white signals and markers and moving with the current of traffic. When extras are so authorized Dispatchers should never give work extras on double track orders to "not protect" against extras or an order that "all extra trains ———— wait at ———— until ————" as he has no definite way of controlling movements. When necessary to move trains against the current of traffic or single a section of double track Dispatcher must not only first clear the track of trains but know that there are no trains between those points on the opposite track that may go through a crossover and run extra under the special rule. The order must be given to trains in both directions on both tracks.

A work extra should not be given right over all trains on one of the tracks unless all trains both ways on either track have received a copy of the order.

### EXTRAS RUNNING WITHOUT ORDERS—2, 3 AND 4 TRACKS.



MOVEMENT BETWEEN E AND F BY MANUAL BLOCK.

#### ASSIGNMENT OF TRACKS.

ALL TRAINS BETWEEN F AND E.

NO. 2 TRACK WESTWARD TRAINS G TO F, E TO C AND WESTWARD PASSENGER TRAINS ONLY C TO A.

NO. 3 TRACK EASTWARD PASSENGER TRAINS ONLY A TO D, EASTWARD TRAINS D TO E AND F TO G.

NO. 1 TRACK WESTWARD FREIGHT TRAINS ONLY C TO A.

NO. 4 TRACK EASTWARD FREIGHT TRAINS ONLY A TO D.

The only orders necessary are to help freight trains ahead of passenger trains, when late, from G to C on No. 2 track (including single track F to E) and from D to G on No. 3 track. If necessary to run a fast eastward freight train around a slow one Dispatcher may notify signalman at Tower B to line up and head the slow freight in on No. 3 (if no passenger train to use it) and signalman at Tower C or D to hold them in if necessary, and follow the fast freight. In this way both trains can be kept moving and the delay, if any, is slight. The same may be done between westward trains between C and B.

An eastward local passenger train may be moved in the same manner on No. 4 track between C and D permitting a limited passenger train to pass them with practically no delay.

The westward or No. 2 track between Crossover 1 and Tower F may be used as a run-around track by an eastward freight train by placing a flagman at Crossover 1 to hold all westward trains, while a flagman from rear end flags a passenger train against the current of traffic on

westward track or between any two crossovers where distance and switch line up permits, thus saving a long freight train from backing through a crossover and flagging both ways. The same may be done by westward trains between Tower E and Crossover 2.

### MOVEMENT OF TRAINS WITH CURRENT OF TRAFFIC ON TWO OR MORE TRACKS BY MEANS OF BLOCK SIGNALS.

Normal position of station signals, STOP.

When it is desired that train continue its movement on the main track, the upper station signal indicates PROCEED.

When it is desired that train take the siding, the lower station signal indicates PROCEED.

The only effect the station signals have on the automatic block system is that the first automatic signal in the rear of the station signals (when in their normal position) indicates CAUTION, or when the lower signal indicates take siding the first automatic block signal in the rear of it indicates CAUTION.

When the upper or main track signal indicates PROCEED, the automatic block signal in the rear of it would indicate PROCEED. Station signals are handled manually, and after train passes a proceed station signal it automatically goes to stop and can not be changed to proceed until the train is clear of the block.

When it is desired to indicate permissive movements a second semaphore signal is placed below.

Station signals are placed far enough beyond station building to permit passenger trains to do station work without passing them.

On portions of the road so specified in the time-table trains will run with the current of traffic by block signals whose indications will supersede time-table superiority.

Movements will be supervised by Dispatchers who will instruct signalmen when necessary.

A train having work which may detain it more than the specified time stated in the rules, at points where com-



munication can not be had, should obtain permission from signalman, approved by Dispatcher, before entering the block.

Scheduled trains will not be run in sections.

Extra trains will move without train orders and will not display signals.

Passenger trains should not leave a station in advance of their schedule leaving time.

When stopped by a station signal where sidings are located, on or near the time of a passenger train, other trains should clear the main track unless otherwise directed by signalman.

Conductors must advise signalman when clear of main track.

Yardmasters and signalmen at terminal stations should obtain permission from Dispatcher before permitting other trains to proceed on or near the time of passenger trains.

A station signal may be passed when stop is displayed when necessary to take siding or for purpose of doing station work, but the proper signal should be displayed, or permission obtained, before the train proceeds from the station.

A clear or caution block signal should not be displayed for, or accepted by, a train occupying a siding.

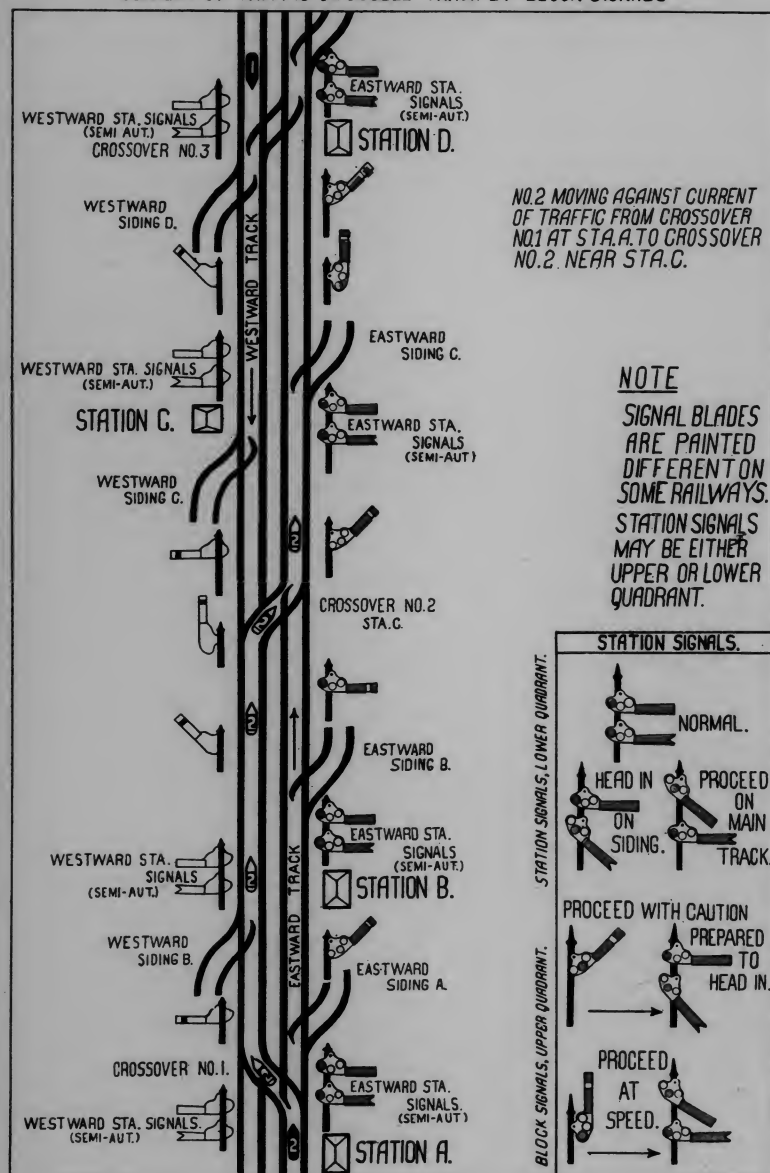
At outgoing switches, where telephones are placed, conductors or enginemen must receive permission from signalmen before proceeding, and ascertain whether a clear or following movement is to be made. Where there are no telephones conductors and enginemen should obtain permission from signalman to proceed after obtaining information as to condition of the block.

Signalman must enter upon his block register in place provided the track upon which trains leave from his station, and whether the movement is made under a clear or caution indication.

In reporting the train to the block station in advance, the name or number of track on which train is moving should be stated.

Except as effected hereby, all block signal and train rules should be respected.

**PLATE 9.** MOVEMENT OF TRAINS WITH AND AGAINST THE CURRENT OF TRAFFIC ON DOUBLE TRACK BY BLOCK SIGNALS



**MOVEMENT OF TRAINS AGAINST THE CURRENT OF TRAFFIC ON TWO OR MORE TRACKS WHERE TRAINS ARE OPERATED BY MEANS OF BLOCK SIGNALS.**

(See Plate 9).

**D-FORM R**

No. 2 has right over opposing trains on No. 1 (or westward) track A to C.

or

After No. 3 arrives at A No. 2 has right over opposing trains on No. 1 (or westward) track A to C.

Before No. 2 is authorized to move against the current of traffic from Station A to Station C the westward track must be cleared of all opposing trains and D-Form R order completed to signalman at C and to all opposing trains at the first station (D) preceding Station C, at which point (C) the train returns to the eastward track, also to the signalmen at each intermediate station between the limits of the reverse movement, which would be Station B under this order. See plate 9, page 115.

The signalman at Station C where No. 2 returns to the eastward track must not send the X response or repeat the order until he is positive his signal is at STOP and distant signal indicates CAUTION. The following signals will then be displayed against opposing trains protecting the movement of No. 2 against the current of traffic A to C, i. e.,

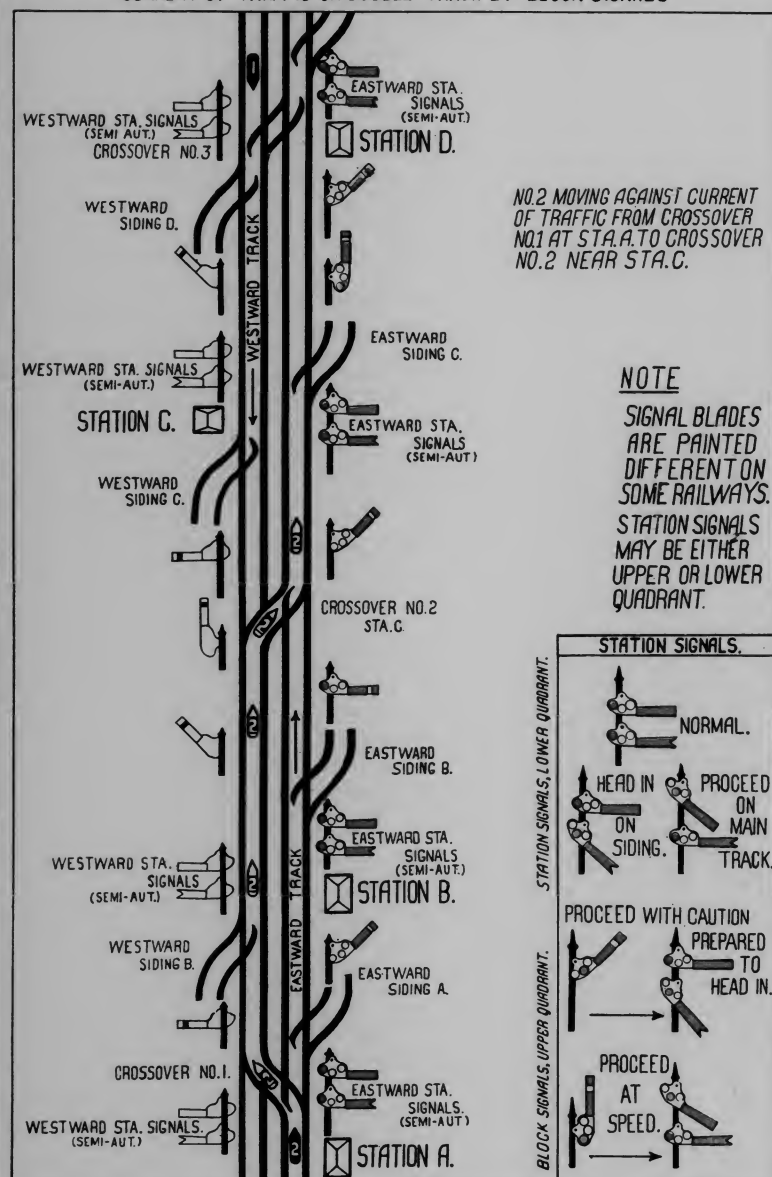
block signal east of D at CAUTION,  
station signal at D at STOP,  
block signal east of C at CAUTION,  
station signal at C at STOP,  
block signal east of B at CAUTION,  
station signal at B at STOP,

other automatic block signal indications between A and D as may be caused by the line-up of crossover, or by the movement of No. 2.

Before permitting the reverse movement the signalman at Station A must examine his block record and ascertain that block is clear of opposing trains. If so, he must then ask permission of Signalman at B, the next block

# INTENTIONAL SECOND EXPOSURE

**PLATE 9.** MOVEMENT OF TRAINS WITH AND AGAINST THE CURRENT OF TRAFFIC ON DOUBLE TRACK BY BLOCK SIGNALS



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*No. 2 has right over opposing trains on No. 1 (or westward) track A to C.*

or

*After No. 3 arrives at A No. 2 has right over opposing trains on No. 1 (or westward) track A to C.*

Before No. 2 is authorized to move against the current of traffic from Station A to Station C the westward track must be cleared of all opposing trains and D-Form R order completed to signalman at C and to all opposing trains at the first station (D) preceding Station C, at which point (C) the train returns to the eastward track, also to the signalmen at each intermediate station between the limits of the reverse movement, which would be Station B under this order. See plate 9, page 115.

The signalman at Station C where No. 2 returns to the eastward track must not send the X response or repeat the order until he is positive his signal is at STOP and distant signal indicates CAUTION. The following signals will then be displayed against opposing trains protecting the movement of No. 2 against the current of traffic A to C, i. e.,

block signal east of D at CAUTION,  
station signal at D at STOP,  
block signal east of C at CAUTION,  
station signal at C at STOP,  
block signal east of B at CAUTION,  
station signal at B at STOP,

other automatic block signal indications between A and D as may be caused by the line-up of crossover, or by the movement of No. 2.

Before permitting the reverse movement the signalman at Station A must examine his block record and ascertain that block is clear of opposing trains. If so, he must then ask permission of Signalman at B, the next block

station in advance, to permit the move. Before giving this permission Signalman at B must see that STOP is displayed for opposing trains on westward (or No. 1) track and reply S.D. for No. 2 on westward (or No. 1) track. Signalman at A may then deliver clearance card (Form A) as hereinafter provided. If block is not clear signalman at B will so inform signalman at A and movement can not be made.

The same procedure must apply before No. 2 enters blocks between B and C.

Before making a movement against the current of traffic, after having received an order under D-Form R, conductor and engineman must obtain a clearance card reading "No orders" or "No further orders" and, in addition, "Block clear" or "Block occupied by \_\_\_\_\_ train ahead, proceed with caution", and must stop before passing each train order or block signal cabin or office, unless they receive such a clearance card. Signalmen at intermediate stations must not permit any engine or train to cross over or occupy the opposite track until after the passage of No. 2 on westward track. No other trains should be permitted to occupy the same block with a passenger train, but other trains may be permitted to make following movements when directed by Dispatcher and authorized clearance card is received from signalman.

On arrival at C, No. 2 should if practicable return to eastward track through first crossover protecting the move as provided by Rule 99, unless properly protected by signals.

After returning to eastward track, No. 2 must obtain clearance card (Form A) stating if block is "clear" or "occupied" by trains ahead, and other information required by such clearance.

The display of markers must be the same as required when moving against the current of traffic where time-table superiority applies.

## **ADDITIONAL RULES FOR THREE OR MORE TRACKS.**

(Rules F-271, 272 and 273).

"The main tracks shall be designated by numerals, and their use indicated by special instructions.

"On portions of the road so specified on the time-table, trains will run with the current of traffic by block signals, whose indications will supersede time-table superiority."

Note: For display of markers on three or more tracks see page 29.

## **ORDER NUMBERS AND DATE SHOULD BE CONSIDERED.**

While an order of a higher number or later date does not constitute a supersedure, it is sometimes necessary to consider the order first issued more as a matter of precaution. Also, where several orders are received at the same train order office it helps to obtain a clear understanding of them.

## **FORM A—MEETING POINTS.**

Trains can not meet on double track but may meet at the end of double track.

In moving a train against an opposing superior train to the end of double track Form "C" (right over) should be used.

If a meet is made on single track and it becomes necessary to change the order to advance the inferior train to the end of double track the "meet" should be annulled and a "right" order, Form "C", issued, which is preferable. However, the order may be changed to read "meet at End of Double Track (or the station which is the end of double track) instead of \_\_\_\_\_". In this case if the train on double track has not reached the meeting point, the train moving from the single to double track may proceed on its run on double track with safety provided it has not received an order which singles the double track or order moving train to be met against the current of traffic. The register at the end of double track may then be checked by the train going from double to single track.

If an opposing extra on single track can not be reached before it arrives at the end of double track, an engine may



station in advance, to permit the move. Before giving this permission Signalman at B must see that STOP is displayed for opposing trains on westward (or No. 1) track and reply S.D. for No. 2 on westward (or No. 1) track. Signalman at A may then deliver clearance card (Form A) as hereinafter provided. If block is not clear signalman at B will so inform signalman at A and movement can not be made.

The same procedure must apply before No. 2 enters blocks between B and C.

Before making a movement against the current of traffic, after having received an order under D-Form R, conductor and engineman must obtain a clearance card reading "No orders" or "No further orders" and, in addition, "Block clear" or "Block occupied by \_\_\_\_\_ train ahead, proceed with caution", and must stop before passing each train order or block signal cabin or office, unless they receive such a clearance card. Signalmen at intermediate stations must not permit any engine or train to cross over or occupy the opposite track until after the passage of No. 2 on westward track. No other trains should be permitted to occupy the same block with a passenger train, but other trains may be permitted to make following movements when directed by Dispatcher and authorized clearance card is received from signalman.

On arrival at C, No. 2 should if practicable return to eastward track through first crossover protecting the move as provided by Rule 99, unless properly protected by signals.

After returning to eastward track, No. 2 must obtain clearance card (Form A) stating if block is "clear" or "occupied" by trains ahead, and other information required by such clearance.

The display of markers must be the same as required when moving against the current of traffic where time-table superiority applies.

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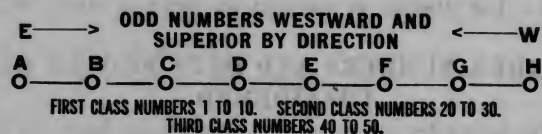
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In moving a train against an opposing superior train to the end of double track Form "C" (right over) should be used.

If a meet is made on single track and it becomes necessary to change the order to advance the inferior train to the end of double track the "meet" should be annulled and a "right" order, Form "C", issued, which is preferable. However, the order may be changed to read "meet at End of Double Track (or the station which is the end of double track) instead of \_\_\_\_\_". In this case if the train on double track has not reached the meeting point, the train moving from the single to double track may proceed on its run on double track with safety provided it has not received an order which singles the double track or order moving train to be met against the current of traffic. The register at the end of double track may then be checked by the train going from double to single track.

If an opposing extra on single track can not be reached before it arrives at the end of double track, an engine may

be given running orders from a point on the double track to a point on single track with orders to meet the opposing extra at the end of double track, or an order not to leave the end of double track unless Extra ——— has arrived. If no other provision for checking against the Extra to be met an observation check must be made while running on the double track. If any doubt as to positive identification in this case, proceed only under protection.



If an engine is given an order to run extra and it is necessary for it to remain at its initial station for an opposing extra, the order should read "After the arrival of Extra 99 West at B Eng 200 run extra B to H." As the order to the extra is not effective until the arrival of Extra 99 West, Engine 200 must remain in clear until it arrives.

If a meet is made at C by Order No. 1 and is afterwards superseded to meet at D instead of C by Order No. 2 and it then becomes necessary to change the meet again to C instead of D, Order No. 2 should first be annulled and a meet made at C. If Order No. 3 reads "meet at C instead of D" it is liable to be misunderstood, especially should a train receive Orders Nos. 2 and 3 at the same office. Conductors and enginemen should in this case note the numbers of the orders and read the lower number first unless they are of different dates, then read the one of earlier date first regardless of the number. The Dispatcher, however, should not create such a condition.

If a meet is made with a work extra with the time limit of the work extra known, the American Railway Association has ruled that the meet holds good after the expiration of time limit. A. R. A. Ruling Sept. 7, 1893 and Oct. 17, 1910.

If a train receives an order to meet a regular train at "D" and on arrival at "D" it is given right over the same

train "D" to "H", it must meet it at "D" unless the Dispatcher annuls the meet.

If a superior train receives an order to meet an inferior train at a Register Station and it finds the inferior train in the yard without signals and with markers properly displayed before it reaches the register, the superior train must not consider it has met the inferior train but check the register for signals that the inferior train may have displayed to the register station. If the inferior train is not to be seen on arrival of the superior train the register must be checked to ascertain if it has arrived. If not, should the superior train move out to the opposite end of yard and find the inferior train without signals and with markers properly displayed (also indicators, if so equipped) it might proceed against a following section.

The importance of checking the register, even though inferior train is not in sight, is that it may have arrived and equipment moved elsewhere, or may have arrived displaying signals to that point, registered in, and, after so doing, backed up into the yard where it can be seen without signals, or signals taken down after registering in and before train passes the register. The superior train should be held responsible if it leaves before it positively knows the schedule of the train it is to meet has been fulfilled into the register meeting point.

"A train order must not be sent to a superior train at the meeting point if it can be avoided. When a train order is so sent, the fact will be stated in the order and special precautions must be taken to insure safety." The following form is generally used: "This order to ——— at ———". In addition to this notice, the Dispatcher should always instruct the operator to take the necessary precaution to stop the train before it reaches the switch at which the inferior train (that the superior train knows nothing about) takes the siding. If the station where the superior train receives the order is not a regular stop, or there is a descending grade, or the approach of the superior train is obscured by fog, storm or obstruction of any kind, or the station is located near the switch where inferior train takes the siding, the operator should go out in the

direction from which the superior train is coming and give it additional stop signals.

If an order is received reading as follows:

*"No. 1 meet No. 2 at B  
instead of C"*

if No. 1 has not as yet received the order to meet No. 2 at C, they must respect the meeting point at B and it is not necessary that they have a copy of the order to meet at C when or after the order to meet at B is received. If it is given them, the moment it is received it is superseded.

#### **FORM B—PASS OR RUN AHEAD.**

When a train is to pass another by train order both should run according to rule to the designated point and there arrange for the rear train to pass promptly. The rule is silent in regard to taking the siding, no doubt owing to conditions that may exist, i. e., length of trains, siding, grade, whether there are cars on the siding or not, whether it is a spur or a matter of delay to the important train.

Unless there is some good reason for not doing so the leading train should take siding and allow the following train to pass without delay and possibly without stopping. The train that is to pass should always approach the passing point prepared to stop if the train to be passed is on the main track, and not assume that they are on the siding or that they have the switches lined up for passage through the siding. If the train to be passed holds the main track they should not assume that it is not necessary to send a flagman to the rear, even though the switches are lined up to run the following train through. The fact that the first switch is lined up does not mean that the switch at farther end is also lined up or that the siding is clear. The train that is to pass must be prepared for any emergency.

If the train to be passed lines up one or both switches they should close them and the train that is to pass should close only those they open unless those they find open are not in charge of a trainman.

When an order is given for a train to run ahead of another until overtaken or to pass when overtaken unusual

precaution should be taken at the point where they are to pass as the passing point is indefinite and following train does not know where they are to pass until they get there.

These two forms should not be used except in extreme cases. Some Railroads prohibit their use and some omit the forms when adopting a book of rules. When such is the case the positive form has to be used and rather than delay an important train the leading train generally permits them to pass before the point named in the order is reached, if overtaken, and in such cases we have created about the same condition that the Standard form would create.

When a train receives an order to run ahead of another until overtaken, and sections are not mentioned, the American Railway Association ruled Oct. 21, 1912, that when overtaken by the first section the train has no authority to proceed ahead of the following sections from that point without further orders. The same principle undoubtedly should apply when a train is given an order to pass another when overtaken.

A freight train should not be given an order to run ahead of a first class train except in emergency cases, and then, only to the first practicable point of passing.

A time order should be used when possible.

When a first class train is being indefinitely delayed or in case of a blockade, the form to run ahead may have to be used, also in moving extras ahead of local freight trains.

When an inferior train is given an order to pass a superior train right is conferred to run ahead of the superior train from that point. After passing the train the same relative condition exists as it does when an order is issued to run ahead.

Under the old rule of Example 3, Form B, the second named train must not exceed the speed of the first named train between the points designated.

A ruling by the American Railway Association April 19, 1909, states "The Standard Code of The American Railway Association does not provide for rules covering certain details of operation, but, as pointed out in numer-

ous foot notes, leaves such matters to be covered by each road to suit its individual requirements. The Committee on Train Rules does not attempt to establish speeds for extra train movement. In the case of railroads equipped with automatic or other block signal systems, the answer to this question is found in the protection afforded by such systems. In the absence of block signals, information covering speed would probably be found in the special instructions contained in the time-table, or by bulletin notice, or other practice in vogue. Thus, if the rules of the railroad restricted the speed of extra trains to 30 miles per hour, or to 20 miles per hour, the second named train would not, under Example 3 of Form B, exceed those speeds. If, however, there were no rules in force placing a speed restriction upon extra trains, it would appear that Rules 105 and 106 should apply in the case of the second named train, and that good judgment and knowledge on the part of the engineman of that train as to the average, or probable, speed that an extra train would actually make on that portion of the road should govern."

It would seem that the object of the rule stating the second named train must not exceed the speed of the first is to confine the speed of the following train to that of the leading train to prevent a rear end collision while both trains are moving. As is ruled by the American Railway Association, if within a block signal system, protection is afforded by such system. If on straight track and a clear day the absence of the leading train for a reasonably safe distance also affords protection, but where the view is obscure by fogs, storms, canyons, tunnels, smoke or at night the only safe procedure is to run under control, that is, to be able to stop if leading train should suddenly appear in view. The brakeman (flagman) on the leading train should take these conditions into consideration and occasionally throw off a fusee, if conditions warrant and especially if speed is materially reduced.

"When an inferior train receives an order to pass a superior train, right is conferred to run ahead of the train passed from the designated point". This means to run from the designated point to the end of the run of the

inferior train on the Division, or Subdivision, if subdivided, whether it is a regular or extra train.

Under the new 1915 revision it states "Unless some form of block signals is used, the following train will run with caution, looking out for the designated train ahead until the order is fulfilled".

#### **FORM C—RIGHT OVER AN OPPOSING TRAIN.**

(This form applies to single track only).

The general assumption that an order giving one train right over another reverses superiority by direction is wrong. Superiority by direction is conferred by time-table and applies only on single track between opposing trains of the same class. An order giving one train right over another under Form C applies not only between opposing trains of the same class, but of different classes, and also between a classified train and an extra train. If we say the form reverses superiority by direction, we are conferring superiority by direction by train order as long as the order is in effect, and when applied between trains of different classes we would have to admit that superiority by class could be conferred by train order when, in fact, only superiority by *right* can be so conferred. Right is simply a higher superiority than superiority by direction or class, and supersedes in so far as they conflict.

It is not permissible under the Standard Rules to apply this form between trains of the same class in the same direction. However, it becomes necessary at times to do so, the authority for which is that portion of the second paragraph of Rule 201 relative to train orders, i. e., "They must be brief and clear in the prescribed form *when applicable*".

If a local or slow first class train, making stops on flag at many stations, is running ahead of a fast train, especially when train order offices are few it would be good judgment to use Form C and give the fast train right over the slow one and require the slow train to clear its time. Such clearance should be at least five minutes. Form B would not be practicable and, if used, would be more dangerous, especially if no block signal system, than Form C, not considering the delay that might result from the use of Form B.



This form does not authorize, so far as the examples go, the Dispatcher to give an extra right over an opposing extra, yet it is the general practice and not only good, but necessary. Without its use between opposing extras it would be next to impossible to handle manifest and stock trains without serious delay, or to get helper engines to the cutting in point to help important trains.

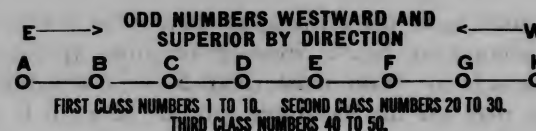
"If the trains meet at either of the designated points, the first named train must take the siding, unless the order otherwise prescribes."

When a regular train is given right over an opposing regular train, the opposing train, when it reaches the limits of the order, may proceed within the limits before the other train arrives, provided it can clear the train given right as many minutes as it was before required to clear the superior train, in which case the conductor should notify the train holding right of its arrival, stopping if necessary. If this is not done it is liable to cause delay when the train given right arrives at the limit of the order and has to wait for the unidentified train that may have been met and that is superior beyond that point. It may also cause a collision in case a section, over which right has been given, displays green signals and clears the time within the limits of the order and is not identified, and the train given right has nothing against the following section.

It is the Dispatcher's duty to issue the necessary orders to prevent such a condition. In case of a flag move, however, unforeseen conditions might arise to prevent him from doing so, therefore the importance of complying with the rule.

When an extra is given right over a regular train, the regular train must not go into the limits of the right order unless directed by train order to do so. When so directed, whether a regular train or an extra, such order does not supersede the right order and must be considered as only helping an inferior train against a train of superior right as was conferred by the right order.

If Eng 99 holds a running order H to A and Dispatcher desires to move opposing Extra 100 East A to H



and gives it right over Extra 99 West A to D or short of its destination, it would be necessary to protect the two opposing extras between D and H in case Extra 99 West had not arrived at D before order is completed to Extra 100 East. This may be done by adding to the order "Extra 100 East take siding and not leave D unless Extra 99 West has arrived." Stating that Extra 99 West receives the order at D is not sufficient protection. If the above form does not appear in the order conductors and enginemen cannot object as it may be that the opposing extra arrived at D before the order was completed to Extra 100 East, or did not exist between H and D. The responsibility rests with the Dispatcher unless conductors and enginemen held copies of each other's running orders, and no provision is made to meet, in which case it would be proper to object.

When an extra is given right over an opposing extra no portion of the opposing extra's territory must be left unprotected.

#### FORM E—TIME ORDERS.

There is quite a difference in the application of a "run late" and a "wait" order to a schedule. The "run late" applies between the stations named in the order, while the wait order applies between the "waiting" station and the first station in advance where the schedule time is the same or later than the waiting time, or the greatest waiting time when there is more than one "wait", for example:

(1) No. 2 run 30 mins. late B to E.

The 30 minutes applies additional to the schedule times at B, C and D, but not to the leaving time at E, because No. 2 is moving out of E and the leaving time at E would be applicable only between E and H and not between B and E. If No. 2 had an arriving time at E, then the 30 minutes would apply at B, C, D and to the arriving time at E. As the 30 minute run late does not apply to the

leaving time at E, the Dispatcher may, if he desires, start a first section of No. 2 from E on time, therefore an opposing inferior train must clear No. 2's schedule time at E, but may use the 30 minute run late between E and B.  
(2) No. 2 run 30 mins. late B to E and 20 mins. late E to G.

This is equivalent to two orders, one 30 minutes late B to E, the other 20 minutes late E to G. The Dispatcher, under this order, can not start a first section from B, C or D less than 30 minutes late or from E or F less than 20 minutes late, but one may be started from G on time. When a schedule is restricted by a train order any train that may be run on that schedule, whether a section or a train without signals, must be given such restriction.

#### ORDER 3

No. 2 wait at C until 9:35 A. M.  
for Extra 99 West.

Schedule time of No. 2

A	8:50 A. M.
B	9:00 A. M.
C	9:10 A. M. — 9:35
D	9:20 A. M.
E	9:30 A. M.
F	9:40 A. M.
G	9:50 A. M.
H	10:00 A. M.

This order makes No. 2's time at C, D and E 9:35 A. M., or the wait order applies between C and F but not at F, because the leaving time at F is greater than the wait at C. The Dispatcher must not start a first section of No. 2 from C, D or E before 9:35 A. M., but may start one from F on time. If the wait was 9:30 A. M. instead of 9:35 A. M. it would apply only between C and E. The wait and schedule time at E then being the same (9:30 A. M.) the Dispatcher could start a first section from E on time. Under this form only Extra 99 West may use the order and No. 2 may leave C before 9:35 A. M. if Extra 99 West has arrived, the order then being fulfilled. When a wait order does not state what the train is waiting for, it must not leave before the specified time as any inferior opposing train may use it. Under

Example 4 of the form any inferior train (either direction) may use the time and No. 2 must not leave any of the stations designated before the time specified.

#### ORDER 4

No. 2 wait at C until 9:35 A. M.  
D until 9:43 A. M.  
E until 9:50 A. M.

This order makes the schedule time at C 25 minutes later, D 23 minutes later, E 20 minutes later and F 10 minutes later, and permits No. 2 to make up time on its schedule. In case of bad track the waits may be made such as to require No. 2 to lose time. This is, beyond doubt, one of the best time orders that can be issued, however, if it is desired that a train make only its schedule time then the "run late" form should be used. The wait at E (the greatest wait of the three) being 10 minutes later than the schedule at F, this order effects the schedule time at F 10 minutes. The Dispatcher must not start a first section from C, D or E before the times opposite those stations, nor from F before 9:50 A. M. A first section may be started from G on time as the schedule at G is not restricted. Any inferior train moving in the same direction may run ahead of No. 2 clearing these times as much as it was before required to clear the schedule time. As the last or greatest wait (at E) is later than the schedule time at F any inferior train in same direction may go as far beyond F as possible clearing the 9:50 A. M. as required by the rule. This form may be used over a part of a Division or Subdivision (see A. R. A. ruling Oct. 18, 1915). As we are not restricted as to the number of waits that may be made in one order, if the order under this example contained only one wait, it should apply in principle the same as if there were two or more, but Dispatcher should not use the one wait to permit a movement in same direction. The time of a "run late" order should be such as to be easily added to the schedule time as 5 or 0, preferably 0.

If No. 4 is given right over No. 5 B to F and a wait at D until 9:30 A. M., No. 4 must not consider that the wait applies only to No. 5, but remain at D until 9:30 A.

M. although No. 5 arrives before that time. Any train receiving such order may use the 9:30 A. M. wait east of D against No. 4 unless it states that they are waiting for No. 5.

The following is not standard but it or its equivalent has been in general use on many Railroads for a number of years and has proven helpful in the prompt and safe movement of trains. The A. R. A. seems to be unable to see its way clear to adopt it as standard like some other forms and rules that have been used and proven highly beneficial:

#### ORDER 5

*No. 2 run 10 mins. late on Order 4.*

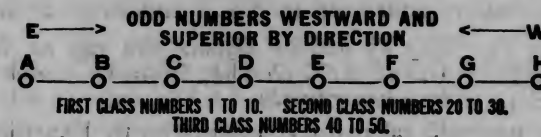
This order states that No. 2 will run 10 minutes late on Order 4, therefore the 10 minutes must only be added to the times of Order 4 and does not in any way apply to the schedule time of No. 2. The order increases each wait in Order 4, 10 minutes, and Dispatchers, train and engine men should be governed the same as if a new wait order had been issued making the time 10 minutes greater than the time of Order 4. Should it become necessary to run No. 2 ten minutes late and not have it apply at C then the order should read "*No. 2 run 10 minutes late on Order 4 from D.*" The 10 minutes must then only be added to the times of Order 4 at D and E. The object of not giving the station to which No. 2 is to run 10 minutes late on Order 4 is to make the time apply at the last wait in the order and in this respect it only differs from the run late form authorized by the Standard Rule.

There are many good reasons why this form is beneficial and space only prevents giving those reasons. The fact that it has been used for over twenty-five years and given good results ought to be sufficient. It should not be used unless authorized by the proper official.

A time order in no way effects the 12 hour existence of a schedule.

Even hours must not be used in stating time of day in train orders, such as 10:00 A. M.

#### FORM F—SECTIONS.



*Example (1) Eng 21 display signals and run as First 1 H to A.*

*Example (2) Eng. 25 run as Second 1 H to A.*

These are single order forms. Example 1 is to be used when the number of the engine for which signals are displayed is unknown, and is to be followed by Example 2.

In case there are to be more than two sections and Dispatcher does not know what engines they will have he will continue to use Example 1, changing only the engine and section numbers until the last section is to be authorized, when Example 2 must be used. Under Example 2 signals must not be displayed, however another order to display signals may be subsequently issued.

The following section does not require a copy of the leading section's order, it being the Dispatcher's duty to have first ordered signals displayed on the leading section before authorizing the following section to run. These forms should be addressed to "C&E Eng \_\_\_\_\_."

*Example (3) No. 1 display signals H to D for Eng 65. Second 1 display signals F to E for Eng 99.*

This form should be addressed to C&E No. 1, and C&E Eng 65, at H and C&E Eng 99 at F and should be used when creating a following section to an intermediate station, or from one intermediate station to another, otherwise Example 4 should be used. On arrival of No. 1 at D it will take down its signals (complying with Rule 96) and proceed as No. 1. On arrival of Second 1 at E it will take down its signals (complying with Rule 96) and proceed as Second 1 to D. Eng 99 will run as Third 1 F to E. Under Example (3) the engine last named will not display signals.

*Example (4)—Engs 21, 25 and 99 run as First, Second and Third 1 H to A.*

Under Example (4) the engine last named will not display signals. This order should be addressed to C&E

Engs 21, 25 and 99 at initial station; if created at an intermediate station, addressed to No. 1 and Engs 25 and 99.

*Example (5) Eng 85 display signals and run as Second 1 D to A. Following sections change numbers accordingly.*

This example taken in connection with Example (4) adds an intermediate section and makes Eng 25 Third and Eng 99 Fourth 1 D to A, and should be addressed to Second and Third 1 and C&E Eng 85.

*Example (6) Eng 85 is withdrawn as Second 1 at C. Following sections change numbers accordingly.*

After having added Eng 85 as Second 1 at D, Example (6) withdraws it as Second 1 at C and the engine drops out and Eng 25 becomes Second and Eng 99 Third section from C. This form may be used to drop any intermediate section. It should be addressed to C&E Second, Third and Fourth 1. The third section will not display signals.

Examples (5) and (6) are for adding and dropping an intermediate section. If it becomes necessary to cut in or cut out a first section the original signal order should be annulled and a new one issued as there is nothing to be gained by using Examples (5) or (6). In this case all sections should receive a copy of the order. When adding or dropping an intermediate section, the sections ahead of the one cut in or out need not be addressed.

ORDER No. 1

*Example (7) Engs 21, 85, 25 and 99 run as First, Second, Third and Fourth 1 H to A.*

ORDER No. 2

*Eng 17 instead of Eng 85 display signals and run as Second 1 F to A.*

Under Order No. 2 of this example Engine 85 will drop out at F and Engine 17 will run as the second section from F to A displaying signals. If it is desired to change engines on the last section, omit that part reading "display signals and". This order (No. 2) should be addressed to Second 1 and Engine 17. It is not necessary to include following sections.

*Example (8) Second 1 take down signals at C.*

Second 1 will take down signals at C, comply with Rule 96 and follow the signals displayed by the first section, and third and following sections must not proceed beyond C. The order must be addressed to second and all following sections. If it becomes necessary to again create a third section from some point beyond C it may be done by using the last portion of Example (3). See ruling of A. R. A. March 2, 1898.

*Example (9) Engs 99 and 25 reverse positions as Second and Third 1 C to A.*

This example makes Engine 99 the second and Engine 25 the third section, or Engine 99 passes Engine 25. Experience teaches that this example is confusing to many during an examination inasmuch as it shows the engines already reversed in the order that reverses them. Presume the purpose was to show the engines in their new position under the order. It seems natural to some to consider the order by itself and when this is done they naturally assume that they must reverse their position as shown in Example 9. Knowing the positions on the road before receiving the order there is, however, not much excuse for a misunderstanding. Conductors and engine-men of Engs 99 and 25 must exchange all orders and will be held responsible for failure to do so. Dispatchers are relieved of all responsibility if the second section holds orders restricting them and fail to give them to the crew that takes their place, and vice versa. Each section affected by the order must arrange signals accordingly. Following sections, if any, need not be addressed.

When authorizing sections to run to an intermediate point of a schedule, except under example 3, the train order must specify which engine shall assume the schedule beyond the intermediate point named, by adding:

*Eng 21 run as No. 1 C to A.*

"Each section affected by these orders must have copies, and must arrange signals accordingly."

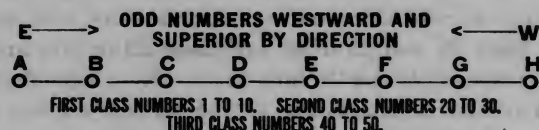
To annul a section for which signals have been displayed over a Division, or any part thereof, when no train is to follow the signals, Form K must be used.



After a section has been annulled, no following section of the same schedule can run over the territory where such section was annulled.

If Engines 70 and 80 are running as First and Second 6 from A to D and Engine 70 as No. 6 from D to H, and it becomes necessary to run Engine 90 as Second 6 from D or any station between D and H, it should not be done unless Engine 80 has arrived at D as the second section, or unless Engine 90 (second out of D) is required to display signals and third section not allowed to leave D until second section arrives. This would protect Second No. 6 west of D.

Dispatcher should not permit a schedule to be fulfilled on the last portion of the run before it is fulfilled on first portion, except by section, thereby causing its fulfillment by installments. If there is a register at intermediate station D it would be bad practice to permit the schedule of No. 6 to be fulfilled between D and H before it is fulfilled between A. and D. However conductors and enginemen are responsible for proper checking of register at D against all sections of No. 6 as well as other schedules.



#### FORM G—EXTRA TRAINS.

*Example (1) Eng 90 run extra A to D.*

Under this order Engine 90 will run extra, keeping clear of the time of regular trains, unless authorized by train order to do otherwise, and need not consider opposing extras unless instructed to do so by train order. On arrival at D, head in at the first switch of the siding. If necessary to use the main track between switches, do so only under protection as authority to run extra expires at the first switch of the siding.

*Example (2) Eng 100 run extra A to G and return to D. (May read "return to A").*

Under this order Engine 100 will run extra as directed, clearing regular trains, if any, and need not consider op-

posing extra trains unless instructed to do so by train order. On arrival at the turning station (G) head in at the first switch of the siding and, when ready to return, head out of the switch of siding nearest the return destination. If necessary to use main track between switches do so only under protection. Extra 100 must not return before reaching the turning point whether a train order office or not except it does so under flag in case of emergency, and then only to the first open train order office, where order must be annulled and new order received. If there is an operator on duty at the turning point a clearance should be obtained before returning as it would be impracticable in many cases to move beyond the train order signal in order to be properly cleared by it. Signals are ~~not~~ to be considered as they are approached and not from the wrong side. At night when semaphore can not be seen it would be impossible to read the signal unless on the opposite side, as the light that governs could not otherwise be seen. As orders may be placed at the turning station affecting return movement there should be no question as to proper clearance, therefore if a clearance card is obtained, the train has something to show it was cleared. If no operator on duty, it is equivalent to a point not a train order office. All orders received on going trip may be used returning if of any value or in any way affect the move.

If after arrival of an extra at destination and order fulfilled it is desired to run the same engine extra to a point beyond or return to any point, it may use annulments of schedules which it may have received on previous trip and should respect all track orders until it reaches end of run, but under no circumstances should it use the same run late or wait orders received on previous trip. New ones should be obtained. When a schedule is annulled, it can not be restored. If there is no lapse of time between arrival under one order and the authority to run extra under another; for example, *Eng 50 run extra A to H*, and on arrival at D it receives an order annulling its original running order and in the same order authorizing it to run extra D to H, then all run late and

wait orders may be used as there was no lapse of time between annulment of one and creation of the other in which the Dispatcher could annul or reduce a run late or wait order.

Example 3, Form G, has been eliminated from the Standard Rules but may be in use on some Railroads.

(Not Standard).

*Old Example (3) Eng 78 run extra leaving A on Thursday, Feb. 17th as follows with right over all trains:*

Leave A 11:30 P. M.  
" C 12:25 A. M.  
" E 1:47 A. M.  
Arrive F 2:22 A. M.

This example may be varied by specifying the kind of extra and the particular trains over which the extra shall or shall not have right. Trains over which the extra is thus given right must clear the time of the extra \_\_\_\_\_ minutes

This order makes the extra superior over all trains over which it is given right. As the extra is created by train order the 12 hour rule does not apply and the extra exists until it arrives at the end of its run or the order is annulled. All trains on the road within the limits of this extra over which it is given right must have copies of the order before it is completed to Extra 78. All other trains must have a copy of the order before being permitted to move over its limits.

Regular trains must clear this extra the amount of time specified in the rules.

Any work extra previously given an order not to protect against extras must respect the time of Extra 78 the same as it would respect the time of a regular train.

If Dispatcher desires to move an extra in the opposite direction, using the same form, he must make an exception of Extra 78 East and it must then clear Extra 78 East the same as other trains are required to clear.

Extra 78 East should respect yard limits the same as other extras.

Form E may be used in connection with this order (if such is authorized) and applies the same as it would apply to a regular train.

## WORK EXTRA.

Both extras and work extras are extra trains as they are not authorized by the time-table.

A work extra may move in either direction for any distance within its station and time limits as many times as desired.

The definition of an extra train says it may be designated as extra for any extra train except Work Extra, and work extra for work train extra.

When extras are moved over the limits of a work extra they must be protected as against each other by one of the several forms used for that purpose.

If a work extra holds orders to work within a specified time limit between C and E (as shown in Diagram 4, Plate 7, page 74) it may move at any time from and to any point, and as often as may be necessary, but must be protected by flagmen in both directions as prescribed by the rules, whether standing or moving on the main track, also clearing the time of regular trains. If it becomes physically impossible to clear regular trains it should be protected as prescribed by the rules.

There are times when it would cause unnecessary delay to obtain orders to occupy main track on the time of regular trains when important work must be done, then if properly protected, it is safe. However, this should not enter too largely in the Dispatcher's consideration of the work extra's requirements, neither should train and engine men abuse the authority of the flag.

Dispatchers should anticipate delay to scheduled freight trains, especially unimportant ones, and give the work extra orders to protect against them. The scheduled freight trains then have advance notice of the work extra's flag, but if the order is not given and the work extra finds it must protect against a regular train without orders to do so, the regular train does not have this advance notice. Inasmuch as the rules require the regular train to have a copy of the work extra's order, train and engine men should take extra precaution when protecting without an order when urgency of work demands.

A work extra moving against a superior train into a sta-

tion should clear five minutes. If moving ahead of the superior train they should clear five minutes or the amount required by the rules of the Railroad where employed, except when running ahead of a first class train, then it should be clear at a station by the time the first class train is due to leave the next station in the rear where time is shown. (See Rule 86 and D-86).

Conditions may exist making it necessary to work on the time of a first class train under protection of flag without orders, in such cases as having a pile partially driven or track obstructed.

Work extras should take the siding for extras and should allow all trains to pass with as little delay as possible.

If the limits of a work extra extend beyond a telegraph station, as at Station D (Diagram 4, Plate 7, page 74), the train order signal at D governs the work extra the same as it governs other trains.

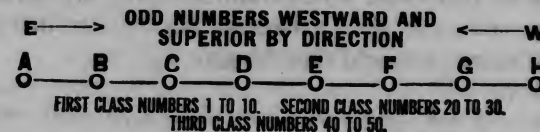
A work extra is not required to register at a registering station within the limits every time it goes into such station, but should register if it passes a register in running from one point to another or when starting to work and also when it arrives after finishing work for the day, if there is a register. Conductor should notify the Superintendent by message of the work performed during the day, time stopped work and the limits desired the next day.

Work extras should not permit their flagmen to go too far beyond the flagging distance, neither should they pull away from their flag too far. When a movement of any consequence is to be made in the opposite direction from the flagman, he should be notified to move up.

The limits of a work extra neither in time nor distance should be extended. When necessary to give it authority to work longer or on new territory, a new work order should be issued.

As work extras may move back and forth repeatedly and for short distances it would be unreasonable to expect them to always display markers on rear of train, or what would be considered the rear if they were running extra or as a regular train.

It is not good practice to give work extras "wait orders" on regular trains when such waits apply entirely outside of the limit of the work extra although the time of the wait is greater than the schedule within the limits of the work extra. However, should it be done, the time may be used.



#### FORM H—WORK EXTRA.

*Example (1) Eng 75 works 6:30 A. M. to 6:30 P. M. between B and D.*

Work Extra 75 must clear regular trains and protect against extras in both directions at all times, whether standing or moving, when occupying the main track, unless otherwise provided. All extras run over the limits of a work extra must be given a copy of the work extra's order. Dispatchers, when creating a work extra, should place the order on both sides of the working limits addressed to all extras.

*Example (2) Eng 77 works 6:30 A. M. to 6:30 P. M. between A and B not protecting against eastward extra trains.*

Under this order Work Extra 77 must clear regular trains, but must protect against westward extra trains. All eastward extra trains must protect against Work Extra 77 if they move over its limits. Work Extra 77 will have no notice of eastward extra trains.

*Example (3) Eng 95 works 5:30 P. M. to 6:30 A. M. between D and C not protecting against extra trains.*

Under this order Work Extra 95 must clear regular trains and need not protect in either direction against extra trains. Any extra train moving over the limits of Work Extra 95 must protect as required by the rule against the work extra. Work Extra 95 will have no notice of extra trains moving over its limits under protection. When a work extra is not under protection against an extra train, the extra train although the rules permit it to move over limits of the work extra under



protection of flag, should not go into the limits if the view is obscure. If it does, it is liable to crowd its flag too closely and the work extra, not knowing the extra train is on the road, may be moving at speed against them. An extra train should only move over the limits of a work extra under this order when conditions are favorable. If the extra train can send a flagman on some train to hold the work extra, it would then be safe.

*Example (4)*

(a) *Work Extra 95 clears Extra 76 East between D and C after 2:10 P. M.*

(b) *Work Extra 95 protects against Extra 76 East between D and C after 2:10 P. M.*

Under (a) Work Extra 95 whether protecting or not must under this order clear Extra 76 East between D and C by 2:10 P. M. Extra 76 East must not pass into the limits until after 2:10 P. M. and will then run expecting to find Work Extra 95 clear of the main track.

Under (b) Work Extra 95 having previously received an order not to protect must, after receiving this order, be protected against Extra 76 East by 2:10 P. M. and Extra 76 East must not pass into the limits until after 2:10 P. M. and will then run expecting to find Work Extra 95 protected.

*Example (5) Work Extra 95 protects against No. 55 (or \_\_\_\_\_ class trains) between D and C.*

Under this order Work Extra 95 may work on the time of No. 55 or other regular trains included, under flag protection. The regular trains against which Work Extra 95 is protecting must have a copy of this order and run expecting to find the work extra protecting.

*Example (6) Work Extra 99 has right over all trains between D and E 7:30 P. M. to 5:30 A. M.*

This order should be addressed first to all trains on both sides of the limits and no train must move into the limits as order gives work extra the exclusive right between D and E from 7:30 P. M. to 5:30 A. M. No flag protection whatever is required of Work Extra 99. If a train should find the work extra at either limit it may approach, it has no right to proceed. The track may be

impassable. Under this order the section of track within the limits named belongs unquestionably to the work extra. Dispatcher should not move any train into the limits of Work Extra 99 even on an order to meet. If it becomes necessary to move trains over the limits of Work Extra 99, its order should be annulled and an order issued that will permit such move. In extreme emergency cases a train might proceed under flag protection with the understanding that they not only will find Work Extra 99 without protection at any point, but find it moving toward them at speed, or may find the track open or obstructed. When an extra train is required to protect over the limits of a work extra, should it pass the work extra, it must not permit the work extra to pass them without again protecting against them.

Dispatcher in moving an extra train over the limits of a work extra should not make a meet between them within the limits without giving the extra train a copy of the work extra's order.

That portion of the rule reading "if the order indicates that the work extra is protecting itself against other trains they will run expecting to find the work extra protecting itself" should not be misconstrued as meaning that if the work extra is under protection against any other train an extra train may move over the limits under the protection provided for other trains. It means if the order indicates that the work extra is under protection against trains of which the extra train is one they may run expecting to find the work extra protecting itself.

The protection on part of a work extra may be temporarily suspended by issuing an order that all eastward or westward extra trains will wait until a specified time

When two or more work extras are to occupy the same limits provision should be made for protection as against each other, and the work extras must not consider an order for all extra trains to wait, or an order not to protect against extra trains in one or both directions as applying to any work extra occupying the same limits. If it is desired that one or more of the work extras, as well as extra trains in one or both directions, wait until a specified



time, then such work extras should be included in the wait order and must be given a copy of the order.

"The working limits should be as short as practicable, to be changed as the progress of the work may require."

When it is necessary to create a work extra over double and single track in the same order Dispatcher should not attempt to apply one form covering both the double and single track, but use both forms, as prescribed.

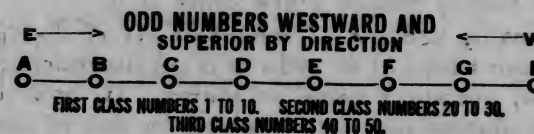
#### FORM J—HOLDING ORDER.

"Hold No. 2", or  
"Hold all, or eastward, trains".

These orders must be addressed to the operator and completed in the regular manner.

If issued on the 31 form operator must sign his name in place provided for conductor to sign and write complete when received opposite his signature. It is then ready to deliver as required by the rules the same as if issued on the 19 form. Copies of the hold order, regardless of the form used, must be delivered to conductors and enginemen of all trains held. Conductors are not required to sign the order, but they as well as the engineman must respect it the same as if addressed to them. After receiving a copy of the hold order the train must not go even though it receives a clearance card until it is given an order addressed and completed to the operator stating that they may go or a copy of the annulment of the hold order. Operators should not issue clearance card until this order permitting the train to proceed is ready for delivery. These order numbers must appear on the clearance card the same as other order numbers where such requirement is necessary. If it is desired to move a particular train or trains and to hold others, the "May Go" form should be used. If all may go, then the order should be annulled. Under no circumstances must this form be used to hold a superior train while an inferior train is moved against it. The only use of the form is to hold trains on either side of a washout, wreck or other obstruction to prevent them from moving until Dispatcher

is ready for them to move should they hold authority to do so and the operator should clear them.



#### FORM K—ANNULLING A SCHEDULE OR A SECTION.

- (a) No. 2 due to leave A, Dec. 25th, is annulled A to H.
- (b) Second 5 due to leave G, July 4th, is annulled G to D.

Under (a) the rule states that the schedule of No. 2 due to leave A, Dec. 25th, becomes void between A and H and can not be restored. In substance the Superintendent, or one authorized to issue train orders, states that no train will be permitted to use the schedule of No. 2 due to leave A, Dec. 25th, and all inferior trains may move the same as if it did not exist on the time-table on that date.

Under (b) the use of the schedule of No. 5 due to leave G, July 4th, is restricted to the first section only, between G and D. The second or following sections, if any, can not use it between those points. The second section of No. 5 due to leave G, July 4th, can not be restored between G and D.

After Dispatcher has issued an order under this form, even though it has not been delivered, he should not annul the annulment.

The annulment of a section is only necessary over the territory where signals have been or will be displayed by the preceding section.

#### FORM L—ANNULLING AN ORDER.

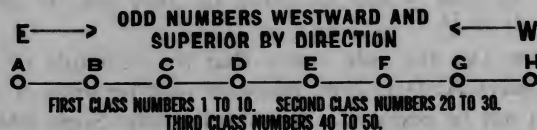
*Order No. 10 is annulled.*

Any order which has not been delivered to a train may be annulled by addressing the annulment to the operator who should destroy all copies except his own, and on that make the following notation: "Annulled by Order No. \_\_\_\_\_".

An order which has been annulled must not be re-

issued under its original number. However, the contents may be made effective again by re-issuing under a new number, thereby making a new order of it.

In making notation of annulment across the face of an operator's copy of an order it is not necessary to state the time, operator's name or initials. If, however, an order is annulled on a date following the date of issue, the date should be given. The annulment of an order should never be written across the face of the order annulled, but should be copied on a separate form.



#### FORM M—ANNULLING PART OF AN ORDER.

*Order No. 10: No. 1 meet No. 4 at D and No. 2 at C.*

If it is desired that the meet at C be annulled the order should read:

*Order No. 15: That part of Order No. 10 reading, No. 1 meet No. 2 at C is annulled.*

If it is issued in the following manner:

*That part of Order No. 10 reading "and No. 2 at C" is annulled*

it would be improper.

After an order is issued annulling a part of an order, the same principle applies as if an entire order had been annulled—that part of Order No. 10 annulled can not be restored by annulling Order No. 15.

#### FORM P—SUPERSEDING AN ORDER OR A PART OF AN ORDER.

*Example (1) No. 1 meet No. 2 at C instead of B.*

Under this order the meet at B becomes void and can not be re-issued or again made effective by annulling the superseding order. If order under Example (1) is annulled there is no meet existing between No. 1 and No. 2 and, if No. 1 is superior by direction, No. 2 must keep clear of No. 1.

*Example (2) No. 2 has right over No. 1 B to E instead of D.*

Under this order the right given No. 2 B to D under previous order is superseded and can not be re-issued under its original number. If order under Example (2) is annulled no right exists and inferior train must keep clear of the time of superior train.

*Example (3) No. 2 display signals for Eng 86 A to G instead of F.*

Under this order No. 2 will display signals to G and the order to display them to F is void and can not be re-issued under its original number. If order under Example (3) is annulled no order then exists requiring No. 2 to display signals.

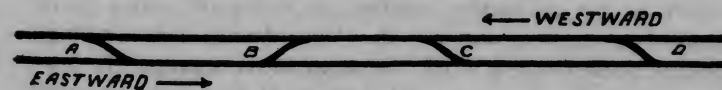
*Example (4) No. 3 pass No. 1 at D instead of C.*

Under this order, No. 3 will pass No. 1 at D and the order requiring them to pass at C is void and can not be re-issued under its original number. If order under Example (4) is annulled there is no passing point between No. 1 and No. 3.

If No. 1 holds an order to take siding and meet No. 2 at C and the order is superseded to meet at D instead of C, the take siding in the order to meet at C does not apply to the order to meet at D.

"When a train is directed by train order to take siding for another train, such instructions apply only at the point named in that order, and do not apply to the superseding order unless so specified."

#### D-FORM H—WORK EXTRA.



*Example (1) Eng 292 works on eastward track (or both tracks) 6:45 A. M. to 5:45 P. M. between A and D.*

"Under (1) the work extra must, whether standing or moving, protect itself within the working limits against extras moving with the current of traffic on track or tracks named. The time of regular trains must be cleared."

Under this order and rule we have a rear end protection only as there are no opposing trains on double track. The work extra has nothing more to do in the way of rear protection than has other trains. If any train stops where it may be overtaken by a following train it must be protected. If any train's speed is materially reduced in obscure places it must also be protected. If a work extra is making a direct run within their limits and perhaps running as fast as any other train, it should not be necessary to leave a flagman.

*Example (2) Not protecting against extra trains.*

When this is added to Example (1) protection against extra trains is not required, and the work extra may move in either direction on track or tracks named without protection or an order to move against the current of traffic provided they clear regular trains.

Oct. 17, 1910, the A. R. A. ruled on an order to work on double track not protecting extra trains as follows:

"This order gives the extra ample authority to move against the current of traffic within the limits and times named, properly clearing regular trains."

Oct. 5, 1915, the A. R. A. also ruled on an order to work on double track, stating that all eastward extra trains wait at \_\_\_\_\_ until a specified time, that the order gave the work extra ample authority to move against the current of traffic within limits of time named, properly clearing the time of regular trains.

On single track if the order indicates that the work extra is not protecting against an extra the extra is required to protect against it. Considering these rulings, which authorizes a work extra to move against the current of traffic clearing regular trains if they hold an order not to protect against extra trains or that all extra trains in a specified direction wait, it would be necessary for the extra train to protect against the work extra; provided they go into their limits. However, there is nothing in the double track rule as there is in the single track rule which requires the extra train to protect.

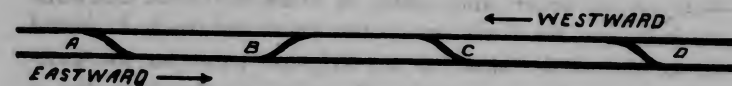
*Example (3) Work Extra 292 protects against No. 55 (or \_\_\_\_\_ class trains) between A and D.*

*Example (4) Work Extra 275 has right over all trains on eastward and westward tracks between B and C 7:30 P. M. to 1:30 A. M.*

Under Examples (3) and (4) the conditions are the same as apply to single track.

When it is desired to move a train against the current of traffic over the working limits provision should be made for the protection of such movement.

On Railroads where tracks are numbered, the current of traffic being first to right, then to left, owing to overhead crossings of the two tracks, it might be well to designate the numbers of the tracks, instead of eastward and westward tracks.



#### D-FORM R—PROVIDING FOR MOVEMENT AGAINST CURRENT OF TRAFFIC.

*"No. 2 has right over opposing trains on No. 1 (or westward) track B to C."*

A train must not be moved against the current of traffic until the track on which it is to run is clear of opposing trains, and if extras are by special rule authorized to run without running orders from and to any point, then all engines holding authority to move either by schedule or as an extra on the other track, or engines within the limits without authority, must be restricted from using the track under the special rule while the movement is being made against the current of traffic.

A work extra is always an opposing train.

Under this order No. 2 must use the westward track and is therefore prohibited from using the eastward track between B and C while the order is in effect.

The schedule time of No. 2 does not apply on the westward track even though the stations are the same for both tracks, as the order is arbitrary and gives No. 2 the right over opposing train on the westward track and no opposing train must leave C until No. 2 arrives.

An inferior eastward train on the eastward track between B and C must be given a copy of this order and

it may then proceed on its schedule or right regardless of No. 2's schedule, but must not leave C unless No. 2 has returned to and left C on the eastward track or authority to proceed ahead of it is received.

If there is no register or operator at C, it will be necessary to make an observation check of No. 2 on the westward track. If in doubt as to the return of No. 2 to the eastward track at C, inferior eastward trains should proceed under necessary protection to a point where information can be obtained.

If an inferior train following No. 2 reaches B before No. 2 returns to eastward track at C, it should be given a copy of the order, and should it make C on the eastward track before No. 2 arrives on the westward track, it should be governed the same as an inferior train on the eastward track that is between B and C at the time No. 2 leaves B on the westward track.

The order may be modified as follows:

*"After No. 5 arrives at B, No. 2  
has right over opposing trains  
on No. 1 (or westward) track  
B to C."*

This order is not effective to No. 2 until No. 5 has arrived at B, then the same conditions exist as before the order was modified.

#### **D-FORM S—PROVIDING FOR USE OF SECTION OF DOUBLE TRACK AS SINGLE TRACK.**

Under this form one of the tracks may be used as single track, single track rules applying. If a track is blocked by derailment, or can not be used owing to a defect for a considerable time, it has been found advisable in many cases to operate the other as single track instead of moving each train belonging to the defective track against the current of traffic.

On double track railroads when it is desired to operate a section of track as single track it is necessary to designate the direction in which trains of the same class are to be superior by direction on the section of track to be so used.

In this case as single track rules must apply so must

the schedules of the track that is out of commission apply to the track that is used as single track, except where the tracks separate and have different stations, then it would not be possible.

When it is possible, a pilot engine and crew should be used to flag trains over the track used by trains in both directions.

Dispatcher must not authorize a reverse movement until the track to be used as single track has been cleared of trains, and the order placed at the nearest convenient point on both sides of the singled track.

If there is no register at the ends of single track some provision must be made to furnish the information as to arrival and departure of superior trains.

Block signals, if any, do not protect opposing movements. They may stop trains belonging to the track to which they apply, but will not stop the trains that are temporarily using it in the opposite direction.

Before the section of track is again used as double track all opposing trains that are authorized temporarily to use the track must be clear of it.

If an order is issued authorizing the use of a section of track as single track, it must be so considered as long as the order is received, or until time limit expires if a time limit is designated, and when once received it applies only for one movement over that section. If the same crew and engine is to be run over the single track again, they must receive the order singling it as often as they make trips over it. If a round trip order to run extra is received, the order creating single track applies both ways.

#### **AUTOMATIC BLOCK SIGNALS.**

Normal position of Home and Distant Signals of Lower Quadrant (two position) is "Proceed". Normal position of Upper Quadrant (three position) is "Proceed". One semaphore of the upper quadrant may give the same indications as two semaphores of the lower quadrant (two position). See comparative signal indications, Plate 16, page 176.

The shape, color and stripe of semaphore blades vary, making it impossible to cover all styles in the following



plates. Some home signals are square end, painted red with a white stripe; others with pointed end, painted yellow with a vertical black stripe or of same angle as the pointed end. Some distant signals have a notched end, painted yellow with a black stripe of the same angle as the notch. The pointed end semaphore is also used as a distant signal on some Railroads. Other Railroads use the square end semaphore as an absolute block signal and the pointed end semaphore as a permissive block signal. The latest single track block system is an absolute block signal governing departure at stations with the permissive block signal governing the arrival and the movement between stations. This system lacks the simplicity of the older system, but it has the merit that it permits trains to run closely together when moving in the same direction and holds opposing trains a station apart instead of holding them at the staggered signals between stations.

Automatic signals, when practicable, are placed either over or upon the right of and adjoining the track upon which trains are governed by them. For less than three tracks, signals for trains in each direction may be on the same signal mast. On roads operated with the current of traffic to the left, the signals may be placed upon the left. Where tracks separate sufficiently to permit, the signals may be placed on the right of the track governed where the current of traffic is to the left.

Block signals control the use of blocks, but unless otherwise provided, do not supersede the superiority of trains, nor dispense with the use or observance of other signals whenever and wherever they may be required.

Interlocking signals, except dwarf or short arm signals coming within the block signal limits, may be made a part of the block signal system and when so arranged they will be semi-automatic.

When an indicator (small signal) is placed opposite or near a main track switch it is so controlled that when there is a train or an open switch within the block in which the switch in question is located it will indicate STOP.

Block signals for double track apply only to trains running with the current of traffic and if a train is moving against the current of traffic no protection to such train is afforded.

"When a train is stopped by a 'stop' signal, it may proceed when the signal is cleared. If not immediately cleared it may proceed (a) on single track, preceded by a flagman to the next clear signal (b) on double track at once with caution."

It is good judgment, and it is required on some Railroads, to wait at least five minutes after stopping on single track to allow the flagman to get out a sufficient distance to insure full protection and, if weather or other conditions are unfavorable, wait a longer time. If the signal next in advance is in plain view and in proceed position, and the track ahead is seen to be clear, trains may proceed not exceeding six miles per hour with safety without being preceded by flagman.

On double track, stop and proceed at once with caution unless the view is badly obscured or during foggy or stormy weather, in which case it may be necessary to send a flagman ahead before starting.

In proceeding with caution, be prepared to stop if block is occupied, switch open, rail broken or other obstruction.

When a block signal is out of service the fact may be indicated by placing a small yellow board on the mast, or by removing the signal blade, or by any other authorized provision. Trains finding such indication must, unless otherwise directed, proceed with caution to the next block signal, and engineman of a train entering the block should be held responsible in case of accident caused by overtaking a preceding train, but this does not relieve the leading train from complying with Rule 99.

Trainmen and trackmen should never yellow board a signal. This is the signal maintainer's duty and he should not do so until he inspects the track to the next opposing signal and displays a yellow board thereon.

The advisability of placing a yellow board on the opposing signal at the opposite end of the block has been

questioned for the reason that its indication may stop an opposing train if not yellow boarded. If a yellow board is displayed at both ends, opposing trains would be running with caution and that is rather indefinite.

"When a train is stopped by a block signal which is evidently out of order and not so indicated, the fact must be reported to the designated officials."

If the signal on the left is seen to indicate proceed as it is passed it means that it is out of order and should be so reported to the proper official.

Both switches of a crossover between two main tracks, or between a main track and any adjacent track, must not be closed while a train, engine or car occupies the connection between the switches.

On single track if there are no block signals visible from a spur or other track, unless a switch indicator is provided to denote the condition of the block ahead, trains should not use such tracks to meet or be passed by other trains. Neither should these tracks be used in switching unless one or more cars are left on the main track to give signal protection when ready to proceed.

On single track if train clears main track, thus placing signals to indicate proceed, they should upon returning have flagman precede the train to a point where the position of the next signal and the track between the train and such signal can be seen to be clear. Do not overlook the fact that a train moving in the same direction may have passed the last signal to the rear before you entered the main track, and be governed by Rule 99.

After clearing a main track on double track the signal to the rear may indicate proceed, and if such signal can not be seen from the point where you desire to re-enter the main track, flag protection must be provided as a train may have passed that signal before switch was opened. If there is a switch indicator it will denote whether or not the block is clear.

A block signal system does not in any way modify the time clearance of the superior train, either moving against or ahead of them. It permits a train to follow another

when signal indicates a clear block thereby eliminating the spacing time required by the rules where there is no block system.

Permissive Automatic Signals are designated by a pointed blade and, in addition, at night by two lights placed diagonally on mast, the lower or marker light always showing same color (no standard color) and the upper light showing color corresponding with the position of signal arm. The lower or marker light of permissive signals is placed on opposite side of mast from upper light to show the two lights on a diagonal line to distinguish a permissive from an absolute signal. The two lights on an absolute signal are placed one directly over the other, or on a vertical line.

On single track when a train is stopped by a permissive signal, if caution or clear signal is not displayed, train may proceed under control expecting to find the block occupied, a switch open or track broken, or otherwise obstructed provided it holds authority to proceed.

A "calling on" arm is an additional arm placed on mast below semi-automatic home signal. When route is clear, but block is occupied or obstructed so that semi-automatic home signal can not be cleared, the "calling on" arm will be used to govern movement of train to the opposing home signal, beyond which point it will proceed in accordance with the rules.

On some roads the normal position of automatic block signals is STOP. If block is clear the signal so indicates when train reaches a given point in advance of the signal.

**ENGINEMEN SHOULD NEVER OVERLOOK THE FACT THAT THEY MAY RECEIVE A CLEAR INDICATION AND THEN FIND THE NEXT SIGNAL AT STOP.**

**NOTE**—When a train is stopped by a home signal on single track, some roads permit it to proceed through the block at reduced speed if track is seen to be clear and next signal in advance is in view, regardless of the position of that signal. On heavy ascending grades on double track, some roads arrange signals so that the most restrictive indication that can be given is caution, thus permitting a train to enter an occupied block without stopping.

### INTERLOCKING.

A mast is the post to which semaphore signals are directly attached. When more than one home signal is on one mast, the upper home signal will govern the main or superior route, and the next lower home signal the inferior or diverging route. A short arm home signal is equivalent to a dwarf signal. It is placed on the mast with other signals to avoid placing a dwarf signal near the mast, unless it is necessary to place a "calling on" arm in that position. A home signal governs only to the next home signal, or through limits of plant, or into the automatic system, if any. When both a home and distant signal are on one mast the home signal controls the block ahead, the distant signal indicates the position of the next home signal. Bracket post as shown on mast of Signal 248, Plate 16, page 176, indicates a track between the mast and the track governed by Signal 248. This bracket post is indicated by a blue light at night.

The normal indication of home and advance signals is STOP and of distant signals CAUTION—derails or diverging switches, for railroad crossings, drawbridges, junctions, and in sidings connected with the running tracks, OPEN. The interlocking of signals with switches, derails, railroad crossings or drawbridges is such that a "proceed" signal can not be given unless the route to be used is clear, and stop signals displayed and all derails or diverging switches for all conflicting routes in their normal position, i. e., stop, or to derail. The display of a proceed home signal locks all switches and derails in the route as far as the point to which such signal gives permission to proceed, locking all opposing or conflicting signals and releasing the corresponding distant signals where such signals are used.

Dwarf signals take you through any cross-over into any track or against the current of traffic or other line up that may be given but not beyond the next home signal. After receiving a short arm or dwarf proceed signal the line up must be duly noted. When a purple (or red) light is displayed in a dwarf signal it indicates STOP.

Home signals of an interlocking plant are generally semi-automatic, that is, after being placed at proceed, the train or engine entering the block automatically places them in normal or stop position, and the signalmen can not again indicate proceed with these signals until train or engine has passed out of the block.

A separate signal must be given for each move made. Not more than one train or engine is permitted to use a given signal.

"A reverse movement within the limits of an interlocking plant, or forward movement after making a reverse movement, must not be made without the proper interlocking signal or permission from the signalman."

If a home and distant signal are on the same mast the distant signal always indicates caution when the home signal is at stop.

"Interlocking signals govern the use of the routes of an interlocking plant, and as to movements within home signal limits, their indication supersedes the superiority of trains, but do not dispense with the use or observance of other signals whenever and wherever they may be required."

Trains or engines may be run to but not beyond a signal indicating stop, except when it is necessary to discontinue the use of interlocking signals and they are fully informed of the situation and know that they are fully protected. In such cases train and enginemen may accept hand signals as against interlocking signals, same to be given from the tower or the ground as provided in your rules. Some Railroads require in addition to the Standard Rule that train be preceded by a flagman of such train through interlocking plants which protect railroad crossings and drawbridges.

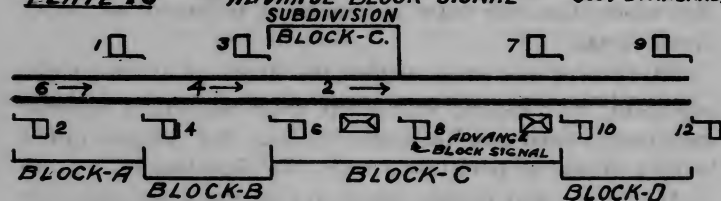
Trainmen must not give proceed hand signals which conflict with interlocking signals.

If a clear or caution signal, after being accepted, is changed to a stop signal before it is reached, stop must be made at once and such occurrence must be reported to proper official.

Trains and engines stopped by the signalman in making a movement through an interlocking plant must not move in either direction until they have received the proper signal from him.

If a stop signal is over-run train or engine must back up sufficiently to permit it to be cleared.

**PLATE 10 - ADVANCE BLOCK SIGNAL - (NOT STANDARD)**



After No. 2 in Block C passes Signal 8 signalman may then advance No. 4 into Block C but not beyond Signal 8. Both Nos. 2 and 4 are then occupying the same block but with an advance block signal (8) between them. No. 6 may then move into Block B.

NOTE: The 1915 revision of Standard Rules eliminated the advance block signal.

An advance signal is a signal having the same function as a home signal, placed some distance in advance of the home signal at a block or interlocking signal station, providing in effect a short block section in which the signalman may hold a train while not interfering with the movement of trains in the main block section, either in advance or in the rear.

Signalman can accept another train in the rear block as soon as the arriving train has passed completely beyond the home signal and he can hold the arriving train at the advance signal until block in advance is clear.

The advance block signal is used in manual block systems and interlocking plants.

In interlocking plants where there are more than two main tracks and three semaphores on one mast, the upper arm authorizes movement on track governed at speed, the second arm authorizes movement on another main track with current of traffic at a reduced speed, say 30 miles per hour, and the lower or short arm semaphore authorizes

movement against current of traffic, through crossovers, or other line-ups at a reduced speed of perhaps 15 miles per hour.

Where there are both passenger and freight tracks within an interlocking plant, there are generally two kinds of signals, one type for the passenger track and a different type for freight track. The type used for passenger track being the regulation signal, while the signal for the freight track may be round on the end with a circle on the semaphore. This signal at night will show two lights of the same color when in caution position only; while in other positions the lights will be the same as other signals.

In terminals where fast movements are required the mast or bridge is used to place signals high so they can be seen from long distances, but at terminals and on some tracks where the movements are slow all signals may be of the dwarf or low type and are therefore in the natural line of vision.

Interlocking home dwarf signals are never semi-automatic. Interlocking distant dwarf signals are always semi-automatic, and in addition are controlled by the next home signal in advance. Trains moving under a clear home signal must therefore be prepared to stop short of another train or obstruction in the block or route, unless there is a distant signal showing clear on the same mast. If the distant signal shows clear it indicates that the block is clear and that the next home signal (if any) is clear.





PLATE II. POSITION LIGHT SIGNALS, DAY & NIGHT (No Colors) ARRANGEMENT OF LIGHTS INDICATING SAME AS UPPER QUADRANT SIGNALS					
SEMAPHORE	LIGHTS	MEANING	SEMAPHORE	LIGHTS	MEANING
		STOP. BLOCK AHEAD OCCUPIED.			PROCEED AT LOW SPEED PREPARED TO STOP. TRACK MAY BE OCCUPIED OR NEXT SIGNAL AT STOP.
		CAUTION. ONE BLOCK AHEAD CLEAR, BUT SECOND OCCUPIED.			PROCEED AT LOW SPEED.
		PROCEED PREPARED TO PASS NEXT SIGNAL AT MEDIUM SPEED. TWO BLOCKS CLEAR, BUT THIRD OCCUPIED.			STOP THEN PROCEED—RULE 504.
		PROCEED. THREE OR MORE BLOCKS AHEAD CLEAR.			PROCEED PREPARED TO STOP AT NEXT SIGNAL.
		PROCEED AT MEDIUM SPEED PREPARED TO STOP AT NEXT SIGNAL.			PROCEED PREPARED TO PASS NEXT SIGNAL AT MEDIUM SPEED.
		PROCEED AT MEDIUM SPEED.			PROCEED.
POSITION LIGHT SIGNALS EQUIVALENT TO TWO SEMAPHORES FOR STANDARD SIGNAL INDICATIONS SEE PLATES 18 TO 22 INCLUSIVE					

## POSITION LIGHT SIGNALS.

### PLATE II.

The Position Light Signal is the latest signal known and its use is as yet confined to electric railroads or portions of steam railroads where electric current is available.

It eliminates both motion and color and is a positive signal both day and night. The apparatus is so constructed with hoods or shields that a beam of light can be plainly seen a sufficient distance in the day time as well as at night, the light beams indicating the same positions as semaphore blades, thus obviating a mistake in a signal indication owing to color blindness.

Each beam consists of four lights (18 inch centers), the second light from the bottom being the axis or in common with either indication. With these signals a clear indication may be given for three blocks in advance, the same as may be done with some other systems.

The difference between the positions in the two "STOP" indications in the Position Light Signals is that the two horizontal rows indicate STOP AND STAY when directly under each other, and STOP AND PROCEED AS PER RULE 509 (old rule 504) when staggered as shown on plate. When two full size beams are not shown engineer knows the signal is imperfectly displayed.

## PLATE SYMBOLS AND OTHER INDICATIONS.

A-P-B SYSTEM—ABSOLUTE-PERMISSIVE BLOCK SYSTEM.

A—ABSOLUTE BLOCK SIGNAL

P—PERMISSIVE BLOCK SIGNAL

H—HOME BLOCK SIGNAL

D—DISTANT BLOCK SIGNAL

S—SEMI-AUTOMATIC BLOCK SIGNAL

I—INTERLOCKING SIGNAL

DW—DWARF SIGNAL

F—FOREIGN LINE INTERLOCKING SIGNAL

— INDICATES LENGTH OF BLOCK

— INDICATES LENGTH OF OVERLAP

— TRAIN

WESTWARD TRAINS ODD NUMBERS

EASTWARD TRAINS EVEN NUMBERS

THE GOVERNING ARM IS DISPLAYED TO THE RIGHT OF SIGNAL

MAST AS SEEN FROM THE APPROACHING TRAIN

RED—STOP

GREEN—PROCEED (OR CLEAR SIGNAL)

YELLOW—CAUTION

Note: The Standard Rules permit each Railroad to designate other colors to indicate caution and proceed if desired.

## QUESTIONS AND ANSWERS—BLOCK SIGNAL.

Q. Define a Block.

A. A length of track of defined limits, the use of which by trains is governed by block signals.

Q. Define a Block Station.

A. A place from which block signals are operated.

Q. Define a Fixed Signal.

A. A signal of fixed location indicating a condition affecting the movement of a train.

Q. Define a Block Signal.

A. A fixed signal governing the use of a block.

Q. Define a Home Block Signal.

A. A fixed signal at the entrance of a block to govern trains entering and using that block.

Q. Define an Advance Block Signal.

A. A fixed signal used in connection with a Home Block Signal to govern the approach thereto.

Q. Define an Advance Block Signal.

A. A fixed signal used in connection with a Home Block Signal to sub-divide the block in advance. (Eliminated by 1915 Revision of Standard Rules).

Q. Define a Block System.

A. A series of consecutive blocks.

Q. Define a Manual Block System.

A. A series of consecutive blocks governed by block signals operated manually, upon information by telegraph, telephone or other means of communication.

Q. Define a Controlled Manual Block System.

A. A series of consecutive blocks governed by block signals, controlled by continuous track circuits, operated manually upon information by telegraph, telephone or other means of communication, and so constructed as to require the cooperation of the signalman at both ends of the block to display a clear or permissive block signal.

Q. Define an Automatic Block System.

A. A series of consecutive blocks governed by block signals operated by electric, pneumatic or other agency actuated by a train, or by certain conditions affecting the use of a block.

Q. How many kinds of semaphore block signals are there?

A. Four; the upper and lower quadrant three position and the upper and lower quadrant two position.

Q. What do the various positions of the upper quadrant indicate?

A.

### THREE POSITION.

(1) Semaphore horizontal and to the right of the mast as seen by the approaching train—STOP.

(2) Semaphore vertical (upward) and to the right of the mast as seen by the approaching train—PROCEED.

(3) Semaphore at an angle above the horizontal and to the right of the mast as seen by the approaching train—CAUTION.

### TWO POSITION.

(1) Semaphore horizontal and to the right of the mast as seen by the approaching train—STOP.

(2) Semaphore vertical (upward) and to the right as seen by the approaching train—PROCEED.

(3) Distant semaphore within block signal system and when used as a protection to obscure switches not within a block signal system, when vertical (upward) and to the right of the mast as seen by the approaching train—PROCEED. When at an angle above the horizontal—CAUTION.

Q. What do the various positions of the lower quadrant indicate?

A.

### TWO POSITION.

(1) Semaphore horizontal and to the right of the mast as seen by the approaching train—STOP.

(2) Semaphore at an angle below the horizontal and to the right of the mast as seen by the approaching train—PROCEED.

(3) Distant semaphore within block signal system and when used as a protection to obscure switches not within a block signal system, when horizontal and to the right of the mast as seen by the approaching train—CAUTION. When at an angle below the horizontal—PROCEED.

### THREE POSITION.

(1) Semaphore horizontal and to the right of the mast as seen by the approaching train—STOP.

(2) Semaphore vertical (downward) and to the right of the mast as seen by the approaching train—PROCEED.

(3) Semaphore at an angle below the horizontal and to the right of the mast as seen by the approaching train—CAUTION.

(4) Distant semaphore when used as a protection to obscure switches not within a block signal system, when vertical (downward) and to the right of the mast as seen by the approaching train—PROCEED. When at an angle below the horizontal—CAUTION.

Note: As between the various systems in use the three position upper quadrant and two position lower quadrant systems prevail as against the other two systems. For other types of signals, see Standard Signal Indication Plates.

Q. Define an overlap. (No standard definition).

A. A section of track immediately beyond a home signal within the limits of which a train is protected not only by that home signal but by the preceding home signal.

Q. Define a Manual Block System.

A. A block system in which the signals are operated manually.

Q. Define a Switch Indicator.

A. A miniature signal located at main track switches to indicate the condition of the block or approach of a train.

Q. When upper or lower quadrant three position signal is used at a manual block station, what are the indications?

A. Horizontal—STOP.

Vertical above or below—PROCEED, BLOCK AHEAD CLEAR.

Angle upward or downward—PROCEED WITH CAUTION, BLOCK OCCUPIED BY TRAIN AHEAD MOVING IN SAME DIRECTION.

## QUESTIONS AND ANSWERS—AUTOMATIC BLOCK SYSTEM.

Q. What is the normal position of Home and Distant Signals of an Automatic Block System?

A. Generally PROCEED. A few railroads operate the automatic block system with normal position STOP.

Q. If the current of traffic is to the left may the block signals be placed upon the left?

A. Yes. However, where tracks separate sufficiently to permit, they may be placed on the right.

Q. Do block signals supersede the superiority of trains, or dispense with the use or observance of other signals?

A. No, not unless otherwise provided.

Q. May interlocking signals coming within block signal limits be made a part of the block signal system? If so, what are they called?

A. Yes, semi-automatic signals.

Q. For what purpose is an indicator (small signal) placed opposite or near a main track switch?

A. It is to indicate whether or not there is a train or open switch in the block in which the switch in question is located. If the block is occupied the small red semaphore (or disc) will indicate "stop"; if not, it will indicate "proceed".

Q. Where switch indicators are used do the indications displayed relieve enginemen and trainmen from protecting their train as required by the rules.

A. No.

Q. If a train is moving against the current of traffic do block signals afford any protection?

A. Yes, the signals will stop an opposing train or one moving with current of traffic, but will have no effect on the train moving against the current of traffic.

Q. When a train is stopped by a block signal (not a permissive signal) when may it proceed?

A. When the signal indicates proceed, unless otherwise provided.

Q. On single track, if not immediately cleared, how should train be governed?

A. Wait the time specified, or longer if necessary, and if no time is specified, wait sufficient time for flagman to advance to a safe distance and follow flagman to the next clear signal.

Q. If the next signal in advance can be plainly seen and is in proceed position and track is seen to be clear, would it be safe to proceed at six miles per hour without a flag, and why?

A. Yes, if the next signal in advance is in proceed position it indicates there is no opposing train in the second block ahead, and by proceeding it will place a home signal in stop position for any opposing train, and there will be

ample protection. By not exceeding six miles per hour a broken rail, should it be the cause of placing signal at stop, would not cause serious trouble.

**Q.** If a home signal is at stop and the next signal in advance can be seen in proceed position, but the track intervening is obscure owing to tunnels or other obstructions, how should train be governed?

**A.** Proceed under flag until track is seen to be clear and signal in advance in proceed position, then pick up flagman and proceed not exceeding six miles per hour through the block.

**Q.** If on double track after stopping the signal does not immediately clear, how should train proceed?

**A.** Proceed with caution, prepared to stop if there is a broken rail, open switch or other obstruction.

**Q.** What would you consider caution or a safe speed in this case?

**A.** Six miles per hour as a broken rail or open switch may be the cause of the signal indicating STOP.

**Q.** How is a signal out of service indicated?

**A.** By a yellow board on the mast, or signal blade removed, or other authorized provision.

**Q.** If a signal is yellow-boarded, or signal blade removed, how should train proceed?

**A.** Proceed with caution (unless otherwise directed) to the next block signal.

**Q.** If a signal is yellow-boarded and in stop position, should the train stop? If not, why?

**A.** No, as the yellow board indicates the signal is out of service and maintainer is required to place the signal at stop when the yellow board is displayed.

**Q.** While proceeding with caution through a block when a signal is out of service, who is held responsible for rear end collision?

**A.** Engineman of following train.

**Q.** After passing a signal yellow-boarded, or signal blade removed, assuming that engineman of the following train is held responsible for an accident, does this relieve the flagman of train ahead from protecting as per Rule 99?

**A.** No.

**Q.** Is it necessary to yellow-board or remove a signal blade of a distant signal?

**A.** No, as the most restrictive indication of a distant signal is the same as the indication of a signal out of service—CAUTION.

**Q.** Who should yellow-board signals?

**A.** The signal maintainer.

**Q.** If a train is stopped by a block signal which is evidently out of order, what is your duty?

**A.** Report it to the designated official and to the signal maintainer.

**Q.** On single track if the signal on the left is found in proceed position with your train in the block, does it effect the movement of your train, and what should be done?

**A.** No, but report it to the proper official and signal maintainer.

**Q.** While a crossover is occupied by a train, engine or car should either switch be lined up?

**A.** No, the movement must be completed before either switch is restored to normal position.

**Q.** Must both switches of a crossover be opened before a train starts to make a crossover movement?

**A.** Yes.

**Q.** If it is absolutely necessary to use a spur or other track for the purpose of allowing a train to pass or to clear for an opposing train, and no block signals near enough to be seen (especially ahead on single track) what course should you pursue?

**A.** Proceed under protection of flag to the next signal or until next signal is in plain view and track between train and signal is seen to be clear.

**Q.** After leaving a main track are you required to protect against following trains before again entering main track?

**A.** Yes.

**Q.** Do block signals change or modify the clearance of a superior train?

**A.** No, superior trains must be cleared within block signal limits the same as if there were none.

**Q.** Within automatic block signal limits may trains follow each other less than the required time provided the signal indicates proceed?

**A.** Yes.

**Q.** When flagging through a block how far would you flag?

**A.** To the next clear signal if the view of track is obscure and signal in advance can not be seen in proceed position.

**Q.** What should flagman look for while preceding a train?

**A.** Broken rails or broken bond wires.

**Q.** Is it important that both train and engine men know their train is clear of the insulated joints when occupying a siding? If not, what might be the result?

**A.** Yes, to prevent placing signals in stop position both ways, thereby causing delay to trains.

**Q.** When cars are set out, is it necessary to place them clear of insulated joints?

**A.** Yes.

**Q.** Is it necessary to notice the switch points after closing a switch within automatic block limits?

**A.** Yes.

**Q.** How can you tell when a switch is connected with automatic block signals?

**A.** By a switch box as shown near Signal H-39, Plate 13, page 169. Example 4.



## QUESTIONS AND ANSWERS—INTERLOCKING.

**Q. Define Interlocking.**

**A.** An arrangement of switch, lock and signal appliances so interconnected that their movements must succeed each other in a predetermined order.

**Q. Define an Interlocking Plant.**

**A.** An assemblage of switch, lock and signal appliances, interlocked.

**Q. Define an Interlocking Station.**

**A.** A place from which an interlocking plant is operated.

**Q. Define a fixed signal.**

**A.** A signal of fixed location indicating a condition affecting the movement of a train.

**Q. Define Interlocking Signals.**

**A.** The fixed signals of an interlocking plant.

**Q. Define a Home Interlocking Signal.**

**A.** A fixed signal at the entrance of a route or block to govern trains in entering and using said route or block.

**Q. Define a Distant Interlocking Signal.**

**A.** A fixed signal used in connection with one or more Home Signals to govern the approach thereto.

**Q. Define an Advance Interlocking Signal.**

**A.** A fixed signal used in connection with the Home Signal to facilitate the movements within an interlocking plant. (Not now Standard).

**Q. Define a Dwarf Signal.**

**A.** A low Home Signal. (Some roads dwarf distant signals).

**Q. How should a Short Arm Home Signal when on the same mast as other signals, be regarded?**

**A.** The same as a Dwarf Signal, unless the system in use provided for a "calling on" arm.

**Q. What effect will the failure of any part controlling the operation of a signal have on the signal?**

**A.** It will cause it to display its most restrictive indication.

**Q. What is the normal indication of an interlocking Home or Advance Signal?**

**A.** Stop.

**Q. What is the normal indication of a Distant Signal?**

**A.** Caution.

**Q. What is the normal indication of a Dwarf or Short Arm Home Signal?**

**A.** Stop.

**Q. What is the normal position of a derail?**

**A.** Open.

**Q. When there are two Home Signals on a mast what do they govern?**

**A.** The upper the superior route, the lower the diverging route.

**Q. When there is a Home and Distant Signal on a mast, the last one controlling movement into the end of a track beyond the last Interlocking Signal, and Home Signal indicates proceed and Distant Signal caution, how should train accepting such signals be governed, and who is responsible for a collision with car or train on such track?**

**A.** The engineman accepting such signal is responsible and must run prepared to stop before reaching train or obstruction.

**Q. How far does a Home Signal govern?**

**A.** To the next Home Signal in advance.

**Q. What does a Dwarf Signal govern?**

**A.** A movement over any track, crossover, derail or switch into any siding, spur or other track that is lined up but not beyond the first Home Signal on the route as lined.

**Q. When three home semaphores on a mast, what do they indicate when in proceed position?**

**A.** Upper arm—proceed at usual speed, route is set.

Middle arm—proceed at restricted speed, route is set.

Lower arm—proceed at slow speed, route is set; track may or may not be occupied.

## LOWER QUADRANT SIGNALS.

**Q. How does a Home Signal indicate STOP?**

**A.** Semaphore horizontal to the right of the mast as seen by approaching trains by day and a red light at night.

**Q. How does a Home Signal indicate PROCEED?**

**A.** Semaphore diagonal below the horizontal to the right of mast as seen by approaching trains by day and a green light at night. If it is a three position signal then the semaphore pointed downward parallel with the mast indicates PROCEED.

**Q. How does a two-position (lower quadrant) Distant Block Signal indicate CAUTION?**

**A.** Semaphore horizontal to the right of mast as seen by approaching trains by day and a yellow light at night.

**Q. How does a two position (lower quadrant) Distant Block Signal indicate PROCEED?**

**A.** Semaphore diagonal below the horizontal to the right of mast as seen by approaching trains by day and a green light at night.

## UPPER QUADRANT SIGNALS.

**Q. How is STOP indicated?**

**A.** Semaphore horizontal with the mast as seen by approaching trains by day and a red light at night.

**Q. How is PROCEED indicated?**

**A.** Semaphore vertical with the mast above the horizontal as seen by approaching trains by day and a green light at night.

**Q. How is CAUTION indicated?**

**A.** Semaphore diagonal above the horizontal as seen by approaching trains by day and a yellow light at night.

Q. May a clear signal be displayed, before derails or diverging switches, if any, in conflicting routes are in their normal position and the switches for the required route are set and locked?

A. No.

Q. How far will the display of a clear signal lock all switches and derails in the route given?

A. Only as far as such clear signal gives permission to proceed.

Q. How does a two position (upper quadrant) Distant Block Signal indicate caution?

A. Semaphore diagonal above the horizontal to the right of the mast as seen by approaching trains by day and a yellow light at night.

Q. How does a two position (upper quadrant) Distant Block Signal indicate proceed?

A. Semaphore vertical with the mast above the horizontal as seen by approaching trains by day and a green light at night.

Q. When both a Home and Distant Signal are on one mast what does the Home Signal control?

A. The block ahead.

Q. What does the Distant Signal indicate when the Home Signal above it indicates stop?

A. Caution. The next Home Signal may also indicate stop.

Q. What does the Distant Signal at caution indicate when the Home Signal above it is at proceed?

A. Indicates next Home Signal is at stop.

Q. What do bracket posts by day and blue lights by night indicate?

A. A track corresponding to each such bracket post between the mast and the track governed by the signals on the mast.

Q. Can a PROCEED signal be given to move a train or engine over a derail, railroad crossing, drawbridge or switch before the route is clear and locked, and all signals, derails and diverging switches for conflicting routes in their normal positions?

A. No.

Q. Does the display of a proceed Home Signal lock all switches and derails in the route, and how far?

A. Yes, to the point to which the signal gives permission to proceed.

Q. After receiving a Short Arm or Dwarf Signal to proceed, what must be ascertained?

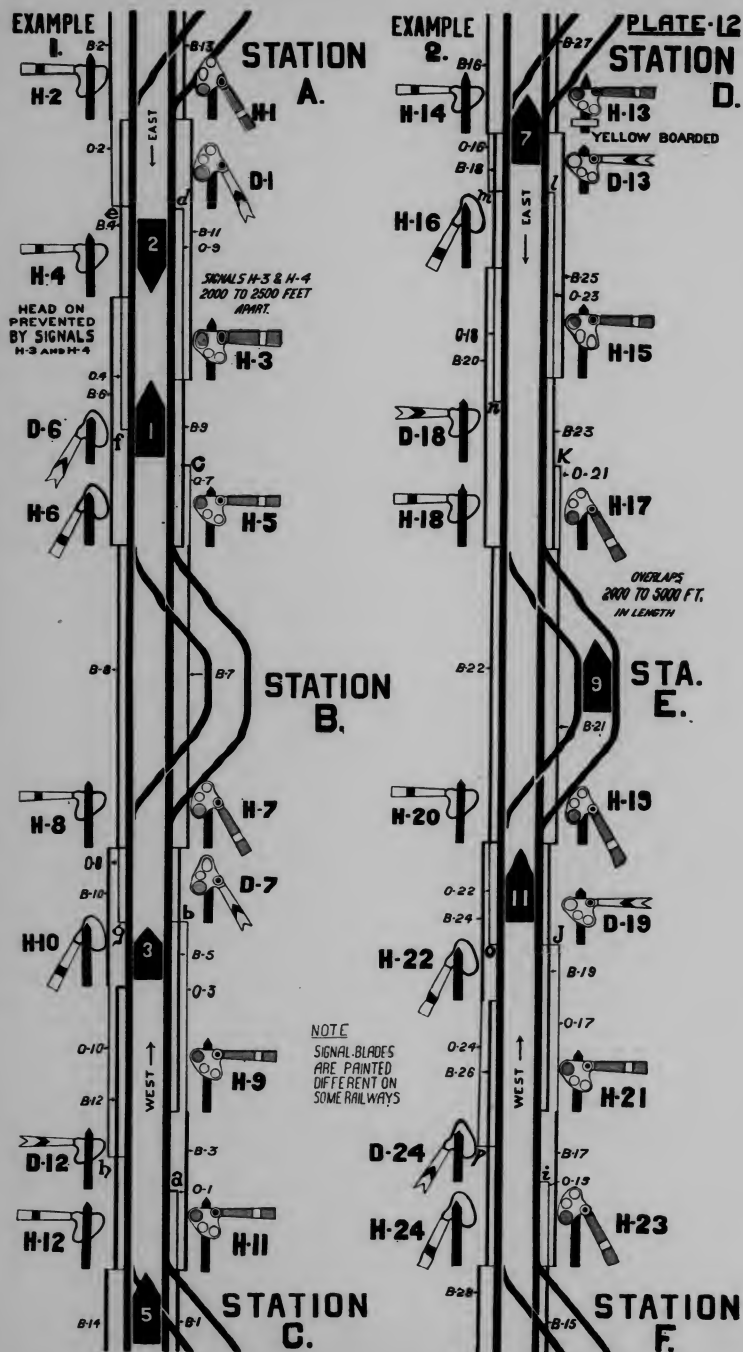
A. If the track line up is proper.

Q. What effect does a train or engine have on any semi-automatic signal indicating proceed on passing the signal?

A. It automatically goes to STOP and can not again be displayed at PROCEED until train or engine is out of the block.

Q. How many moves may be made on one clear signal?

A. One.



**Q.** Do interlocking Home Signal indications supersede the superiority of trains within the limits of their control?

**A.** Yes.

**Q.** Do their indications dispense with the use or observance of other signals whenever and wherever they may be required?

**A.** No.

**Q.** If a signal permitting a train to proceed, after being accepted, is changed to STOP before it is reached, how should train be governed?

**A.** Stop at once; report occurrence to proper official.

**Q.** When may a train or engine proceed on a hand signal as against interlocking signals?

**A.** Not until enginemen and trainmen are fully informed of the situation and all local or special rules are complied with.

**Q.** May trains or engines pass a signal indicating stop?

**A.** No, except under conditions of preceding question.

**Q.** After a train or engine is stopped by a signalman in making a movement through an interlocking plant, when may it move in either direction?

**A.** After receiving the proper signal from the signalman.

**Q.** May a reverse movement within an interlocking plant, or a forward movement after making a reverse movement, be made without proper interlocking signal or permission from the signalman?

**A.** No.

## DESCRIPTION SINGLE TRACK BLOCK SIGNALS— PLATE 12.

### Example 1.

Train 3 holds signal at H-11 against No. 5 until No. 3 passes over Block B-3 and out of Overlap O-3 at point "b."

Train 1 holds Signal H-4 against No. 2 after passing Signal H-5.

Train 2 holds Signal H-3 against No. 1 after passing Signal H-2, thus preventing a head-on collision.

Signals H-3 and H-4 are approximately 2500 feet apart.

### Example 2.

Train 7 holds Signal H-15 until it passes Signal H-13. After passing beyond H-13, H-15 indicates proceed and Train 7 then holds only D-13 and H-13 to the rear. Train 9 before opening switch to head out at Station E should note position of Signal H-18. If H-18 on the left is at stop it may indicate that a train moving in the same direction is in the block.

If Signal H-13 shows the yellow board it indicates the signal is out of service and trains must proceed with caution through the block.

Train 11 holds Signals D-19 and H-21 to the rear and Signals H-20, H-18 and D-18 ahead.

## QUESTIONS AND ANSWERS—PLATE 12.

### Example 1.

Q. What is the approximate distance between two Home Signals intermediate between Stations, for example, between Signals H-3 and H-4?

A. 2,600 feet.

Q. As soon as Train 3 passes Signal D-7, what signals will it hold?

A. Signals D-7 and H-9 to the rear and D-6, H-6 and H-8 ahead.

Q. After Train 5 passes Signal H-11, how long will it hold it at stop?

A. Until it passes out of Overlap O-3 at point "b".

Q. How long will Train 3 hold Signals H-11 and H-9?

A. Will hold H-11 until it passes out of Overlap O-3 at point "b" and hold H-9 until it passes Signal H-7.

Q. At what point did Train 1 put Signal H-4 at stop against Train 2?

A. When it passed Signal H-5.

Q. At what point did Train 2 put Signal H-3 at stop against Train 1?

A. When it passed Signal H-2, thus preventing a head-on collision.

Q. At what point did Train 3 put Signal H-8 at stop?

A. When it entered Overlap O-10 at point "h".

### Example 2.

Q. How should Train 7 proceed after passing Signal H-13 yellow-boarded?

A. Proceed with caution to the next signal.

Q. If on Train 9 ready to head out of siding at Station E, what signals would you consider before opening switch?

A. H-17 to ascertain if block ahead is clear, then H-18 to ascertain if train is following that might side-swipe Train 9.

Q. If H-18 indicates proceed, would that relieve Train 9 of protecting against a following train while taking main track?

A. No.

Q. How long are overlaps?

A. Two thousand to five thousand feet.

Q. If moving from Station F to Station E and Signal H-23 is at stop and H-21 is seen and it indicates stop, how should train proceed?

A. Under protection of flag.

Q. If moving from Station F to Station E and Signal H-23 is at stop and Signal H-21 is in plain view and indicates proceed and track is seen to be clear, how should train proceed?

A. Not exceeding six miles per hour.

Q. If moving from Station F to Station E and Signal H-23 is at stop and Signal H-21 can not be seen until you get around a curve beyond Signal H-23, how should train proceed?

A. Under protection of flag to the point where Signal H-21 can be seen, and if in proceed position and the track be-





Q. If the switch in siding at Station H is left lined up for the team track, what signals would it hold?

A. Signals D-30, H-30, H-31 and D-31.

Q. If either switch in the main track at Station H is left open, what effect would it have?

A. Signals H-30 and H-31 would indicate STOP and Signals D-30 and D-31 would indicate CAUTION.

#### Example 4.

Q. Train 17 over insulated joint at Station K, what signals does it effect?

A. Signals H-38 and H-39 indicate STOP and Signals D-38 and D-39 indicate CAUTION.

Q. What is the object of the overlap post at Station K?

A. To prevent a westward train passing Signal H-37 at proceed and an eastward train passing Signal H-36 at proceed at the same time with no stop signals between them.

Q. If Train 15 at Station K passes the overlap post before an opposing train it is to meet passes Signal H-36, what would be the result?

A. It would hold the opposing eastward train at Station J.

Q. If Train 15 is to meet an opposing train at Station K, how should it be governed?

A. Should not pass overlap post at Station K until the opposing train has passed Signal H-36 at Station J.

Q. What does Dwarf Signal DW-47 govern?

A. Derail 5 and movement out of siding at Station L over crossing to Signal H-43.

Q. What does Interlocking Signal I-48 to the left of main track at Station L govern, and why was it placed to the left of main track?

A. Signal I-48 governs westward movement on the main track over crossing to Signal H-43. It was placed to the left of the main track owing to there not being room for it between the main track and siding.

Q. How far would a westward train hold Signal H-43 at stop?

A. Until it passes out of Block B-43 at Signal H-39.

Q. Where would Signal S-44 take an eastward train if it indicated proceed?

A. Over the crossing to the next automatic signal, or through interlocking plant.

Q. Where would Signal I-44 take an eastward train if it indicated proceed?

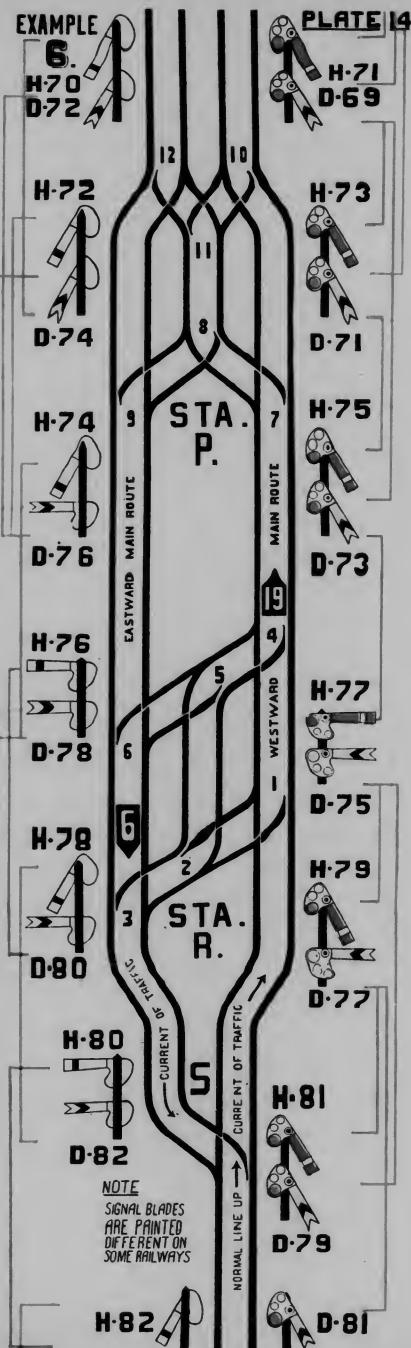
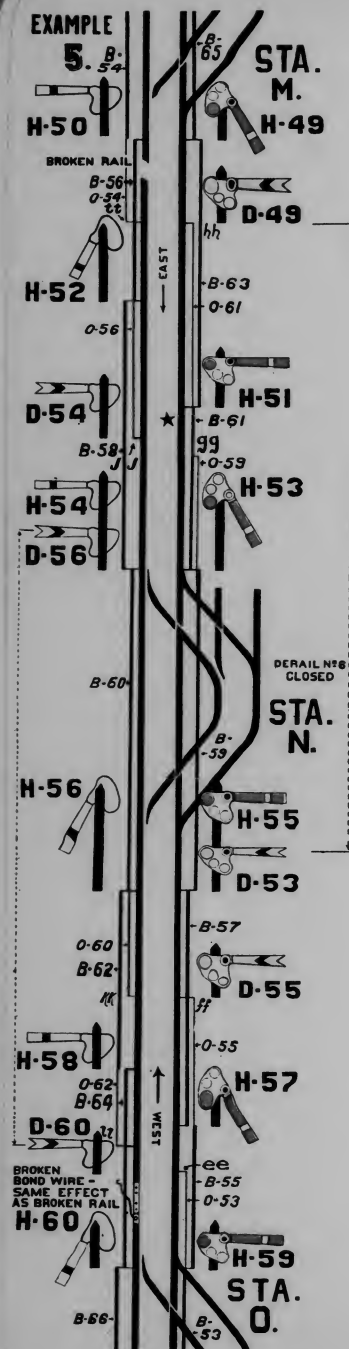
A. Over the crossing and into siding at Station L.

Q. Why was Signal H-42 placed opposite Signal D-39 and Signal H-41 placed opposite to Signal D-44?

A. Owing to a short block and to prevent overlapping into Stations K or L.

Q. If Signal H-41 was eliminated and Block B-43 overlapped into Station K, where would a westward train in the overlap at Station K hold a following train?

A. At Signal H-43.



Q. With Signal H-41 where would a train in the same position at Station K hold a following train?

A. At Signal H-39 instead of H-43.

Q. After Train 15 passes overlap post at Station K, what signals does it then hold against an opposing train?

A. Signals H-36, H-38 and D-38.

Q. If an opposing eastward train passes signal H-36 before Train 15 passes the overlap post at Station K, what signal will it hold against Train 15?

A. Signal H-37.

Q. Without any Home Signals between Stations J and K may a butting collision be prevented by the signals; if so, which ones?

A. Yes. Signal H-36 would hold an eastward train at Station J and Signal H-37 would hold a westward train at Station K.

### DESCRIPTION SINGLE TRACK BLOCK SIGNALS— PLATE 14.

#### Example 5.

Broken rail near Signal H-50 holds Signals D-49 and H-51 against trains moving from Station N to Station M and holds Signal H-50 and a home and distant signal west of Station M against eastward trains. Closed Derail 6 at Station N holds Signals D-54 and H-54 against eastward movements, and holds Signals D-55 and H-55 against westward movements.

Signal D-53 indicates caution until a westward train passes out of Overlap O-61 at "hh" as shown by dotted line.

Signal D-56 indicates caution until an eastward train passes out of Overlap O-62 at "11" as shown by dotted line.

Broken bond wire between Signals D-60 and H-60 holds Signals H-58 and D-60 against eastward trains, also holds Signal H-59 and a Home and Distant Signal east of Station O against westward trains.

### DESCRIPTION DOUBLE TRACK BLOCK SIGNALS— PLATE 14.

#### Example 6.

Normal line up for westward track at "S" holds Signals H-80, D-82 and D-80 against eastward movements from double to single track. Train 19 holds Signals H-77, D-75 and D-77 until it passes Signal H-75, then Signals

H-77 and D-77 go to proceed position and Train 19 will then hold Signals H-75, D-73 and D-75 until it passes Signal H-73, then Signals H-75 and D-75 will go to proceed position, and so on.

Train 6 holds Signals H-76, D-78 and D-76. Signal D-80 indicates caution and Signal H-80 indicates stop, which protects No. 6 against the westward line up at "S".

When switch at "S" is lined up for an eastward movement to the single track Signal H-81 goes to stop and Signals D-79 and D-81 indicate caution.

After switch at "S" is lined up for the eastward movement Signals H-80 and D-80 go to proceed.

The normal line up of siding at Station "R" is for a back in movement from either main track to the siding after main track switch is lined up.

The normal line up of the siding at Station "P" is for a head in movement from either main track to the siding, after main track switch is lined up.

#### QUESTIONS AND ANSWERS—PLATE 14.

##### Example 5.

**Q. What holds Signals H-50 and H-51 at stop and D-49 at caution?**

**A. Broken rail in Block B-56.**

**Q. If there was a broken rail in Block B-61 at point indicated by a \* what signals would it effect and how?**

**A. Signals H-50, H-52 and H-53 would indicate stop.**

**Q. Is Derail 6 in its normal position?**

**A. No, it should be open.**

**Q. How long will a westward train hold Signal D-53 at Caution?**

**A. Until train passes out of Overlap O-61 at "hh" or Signal D-49.**

**Q. How far will an eastward train hold Signal D-56 at Caution?**

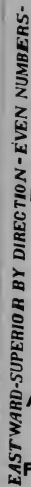
**A. Until train passes out of Overlap O-62 at "ll" between signal H-58 and D-60.**

**Q. If Derail 6 in siding at Station "N" is closed (lined up to take the main track) by a westward train before an opposing train it is to meet passes, what signals would it hold against the eastward train, and what would be the result?**

**A. Would hold Signal H-54 at stop and Signals D-54 and D-56 at caution, perhaps causing eastward train to flag Block B-60.**



## ABSOLUTE - PERMISSIVE BLOCK SIGNAL SYSTEM



### Example 6.

A. Signals H-70, D-72 and a distant signal on the next mast west of Signal H-70.

**Q. If Switch 7 of siding at Station "P" was lined up for a westward train to head in, what signals would it hold?**

**A. Signals H-75, D-73 and D-75.**

Q. If Switches 1, 2 and 3 were lined up for a crossover movement, what signals would they hold?

A. Signals H-76, D-76 and D-78 on eastward main route and Signals H-79, D-79 and D-77 on westward main route.

**Q. If Switch 1 was open, what signals would it hold?**

**A. Signals H-79, D-79 and D-77.**

**Q. If Switch 3 was open, what signals would it hold?**

**A. Signals H-76, D-76 and D-78.**

**Q. If Switches 4, 5 and 6 were lined up for a crossover movement, what signals would they hold?**

A. Signals H-76, D-76 and D-78 on eastward main route and Signals H-77, D-77 and D-75 on westward main route.

**Q. If Switch 11 was lined up for a back in movement from the westward main track to the siding, what signals would it hold?**

**Q.** If Switch 8 is lined up for a back in movement from the eastward main track to the siding, what signals will it hold?

**A. Signals H-72, D-72 and D-74.**

**Q. If Switches 12, 7, 4, 5 and 6 are lined up for an eastward movement against the current of traffic on westward track from Station P to Station R, what signals will it effect, and how?**

A. Signals H-75 and H-77 would indicate stop for westward movements. Signals D-73, D-75 and D-77 would indicate caution for westward movements. Signals H-76 and H-70 would indicate stop for an eastward movement. Signals D-78, D-76 and D-72 and the distant signal on the first mast west of Signal H-70 would indicate caution.

### Example 7.

The crossover open at "V" holds Signals H-93, D-91 and D-93 against westward trains, and Signals H-94, D-96 and D-94 against eastward trains.

Switch 17 at west end of siding at Station U lined up for the crossover holds Signals H-90, D-92 and D-90 against eastward trains.

Car 2 foul of the crossover at Switch 23, Station T, holds Signals H-87, D-85 and D-87 against westward trains.

Car 1 foul of the crossover at Switch 20, Station T, holds Signals H-86, D-88 and D-86 against eastward trains.

# QUESTIONS AND ANSWERS—PLATE 15.

## Example 7.

Q. What is the normal line up of switches 14 and 17 at Station U?

A. To permit a back in movement from either main track.

Q. If both switches of Crossover V were lined up for main route what effect would it have on the signals?

A. The same effect as if only one switch was lined up.

Q. If both switches of Crossover V were lined up what signals would it effect, and how?

A. It would place Signals H-93 and H-94 at stop and Signals D-94, D-96, D-91 and D-93 at caution.

Q. Would you line up either switch of Crossover V for the main if there was a car or engine on the crossover?

A. No.

Q. If Car 2 at Station T was placed into clear what signals would it release?

A. Signals H-87, D-85 and D-87.

Q. What effect has Car 2 foul of Switch 23, Siding T, on Signals H-86, D-86 and D-88?

A. No effect.

Q. What is the cause of Signal H-86 indicating stop and Signals D-86 and D-88 indicating caution?

A. Car 1 foul of Switch 20, Station T.

Q. If a train was moving against the current of traffic from Station T to Station U would the signals afford it any protection?

A. No. The position of the semaphores may be seen from the rear of the signal but it is the train moving against the current of traffic that is holding them.

Q. Before a train holding authority to proceed on the westward track crosses over from westward to eastward track at Crossover "V" what flag protection is necessary?

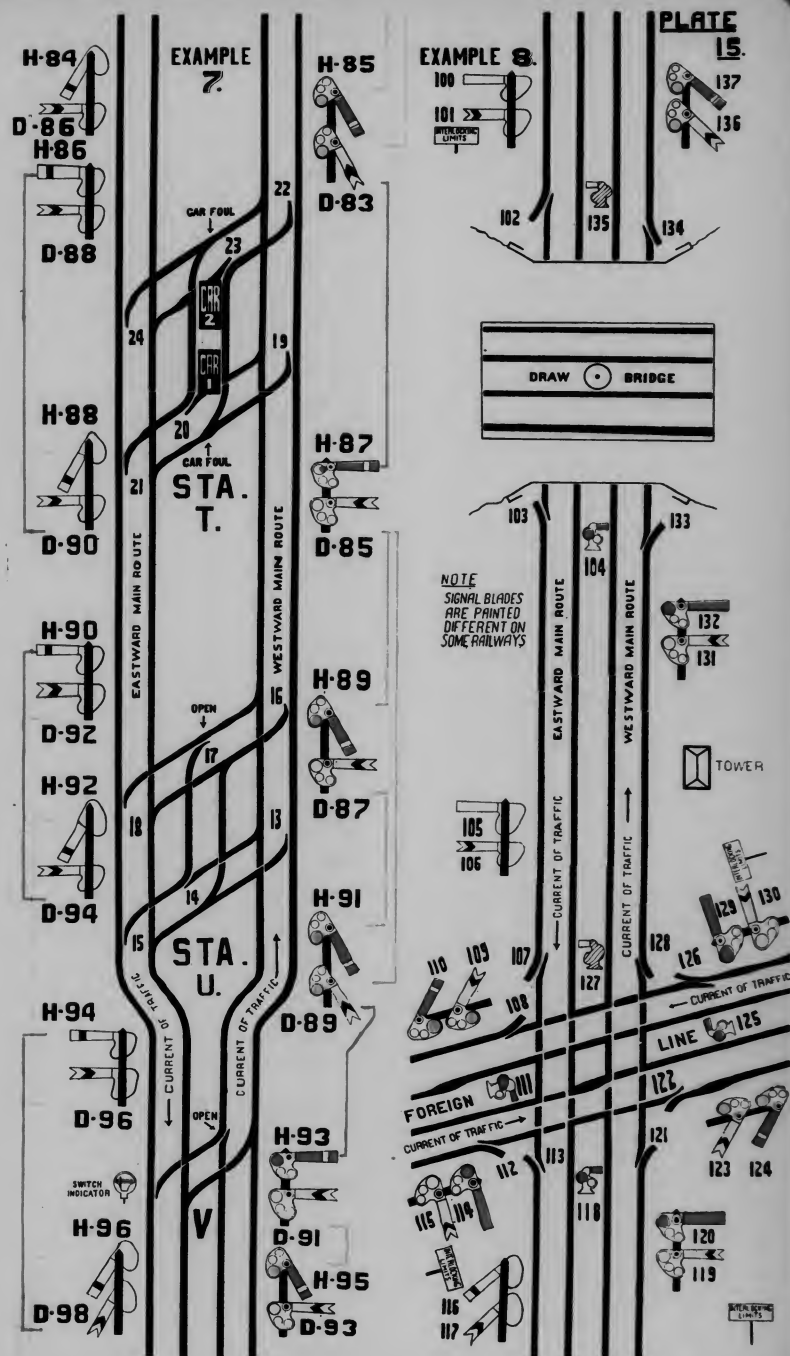
A. A flagman should be sent west to protect against eastward trains on eastward track and a flagman sent east to protect against westward trains on both tracks.

Q. Why is it necessary to protect against westward trains on the eastward track as well as on the westward track?

A. Because the Dispatcher may be moving a train against the current of traffic on eastward track and it is not necessary to notify the westward train before doing so.

Q. If an engine without schedule or train order authority desire to use a crossover, what flag protection does it require?

A. A flagman both ways to flag trains on both tracks as the Dispatcher may be moving trains against the current of traffic on either track.



**QUESTIONS AND ANSWERS—INTERLOCKING,  
DOUBLE TRACK CROSSING AND DRAW-**

**BRIDGE—PLATE 15.**

- Q.** Where would Signal 120 take you?  
**A.** Over railroad crossing and to Signal 132.
- Q.** If Signal 120 indicated PROCEED what position would Signals 129, 114, 111 and 125 indicate?  
**A.** Stop.
- Q.** If Signal 132 indicated PROCEED and Automatic Signal 137 indicated STOP, what position would Signal 131 indicate?  
**A.** Caution.
- Q.** If Automatic Signal 137 indicated PROCEED, and Signal 132 also indicated PROCEED, what position would Signal 131 indicate?  
**A.** Proceed.
- Q.** How far would Signal 135 take you?  
**A.** Against the current of traffic over drawbridge to Signal 127.
- Q.** How far would Signal 127 take you?  
**A.** Against current of traffic over crossing through interlocking plant.
- Q.** Where would Signal 100 take you?  
**A.** Over drawbridge to Signal 105.
- Q.** Where would Signal 105 take you?  
**A.** Over crossing to Automatic Signal 116.
- Q.** Where would Signal 118 take you?  
**A.** Against the current of traffic on eastward track over crossing to Signal 104.
- Q.** Where would Signal 104 take you?  
**A.** Against the current of traffic on eastward track over drawbridge through interlocking plant.
- Q.** If train or engine desires to back up before passing through entire block, may it do so?  
**A.** No. It must proceed through the block and obtain a "proceed" signal for back up move.
- Q.** May two or more trains or engines use a given signal?  
**A.** No. A signal must be given for each movement.
- Q.** Do interlocking Home Signal indications supersede the superiority of trains within the limits of their control?  
**A.** Yes, but this does not relieve trains from having the necessary right or schedule to move through interlocking plants of a railroad crossing or drawbridge.
- Q.** Do interlocking signals dispense with the use or observance of other signals whenever and wherever they may be required?  
**A.** No.
- Q.** May a distant signal indicate PROCEED when you pass it and the Home Signal in advance indicate STOP after

you pass Distant Signal and before you reach the Home Signal?

A. Yes.

Q. If the Distant Signal indicates PROCEED when passed, would it excuse train for passing the Home Signal in advance in STOP position?

A. No.

Q. Must enginemen and yardmen be positive when a hand signal is given against a fixed signal that the hand signal is intended for their train before acting upon it and that they are protected?

A. Yes.

Q. If a hand signal to proceed against a fixed signal at stop is received from signalman, how far does it govern?

A. Only to the next home signal or through the interlocking plant.

Q. What would you do approaching a signal with the light out?

A. Regard it as the most restrictive indication that can be given by that signal until position of semaphore can be seen, then be governed by its position and report absence of light to proper official.

Q. After calling for a signal and failing to receive it, are you required to look for hand signal from signalman and, if view of tower is obscured, send a flagman ahead to a point from which tower is visible?

A. Yes.

#### **DESCRIPTION INTERLOCKING PLANT EASTWARD MOVEMENTS—PLATE 16.**

Signal 201 takes you over eastward main route to Signal 226, and Signal 226 continues the move through interlocking limits to Automatic Home Signal 242. Distant Signal 202 indicates position of Home Signal 226. If Signal 226 is at proceed Distant Signal 227 indicates position of Automatic Signal 242. If Signal 226 indicates stop Signal 227 indicates caution regardless of position of Signal 242.

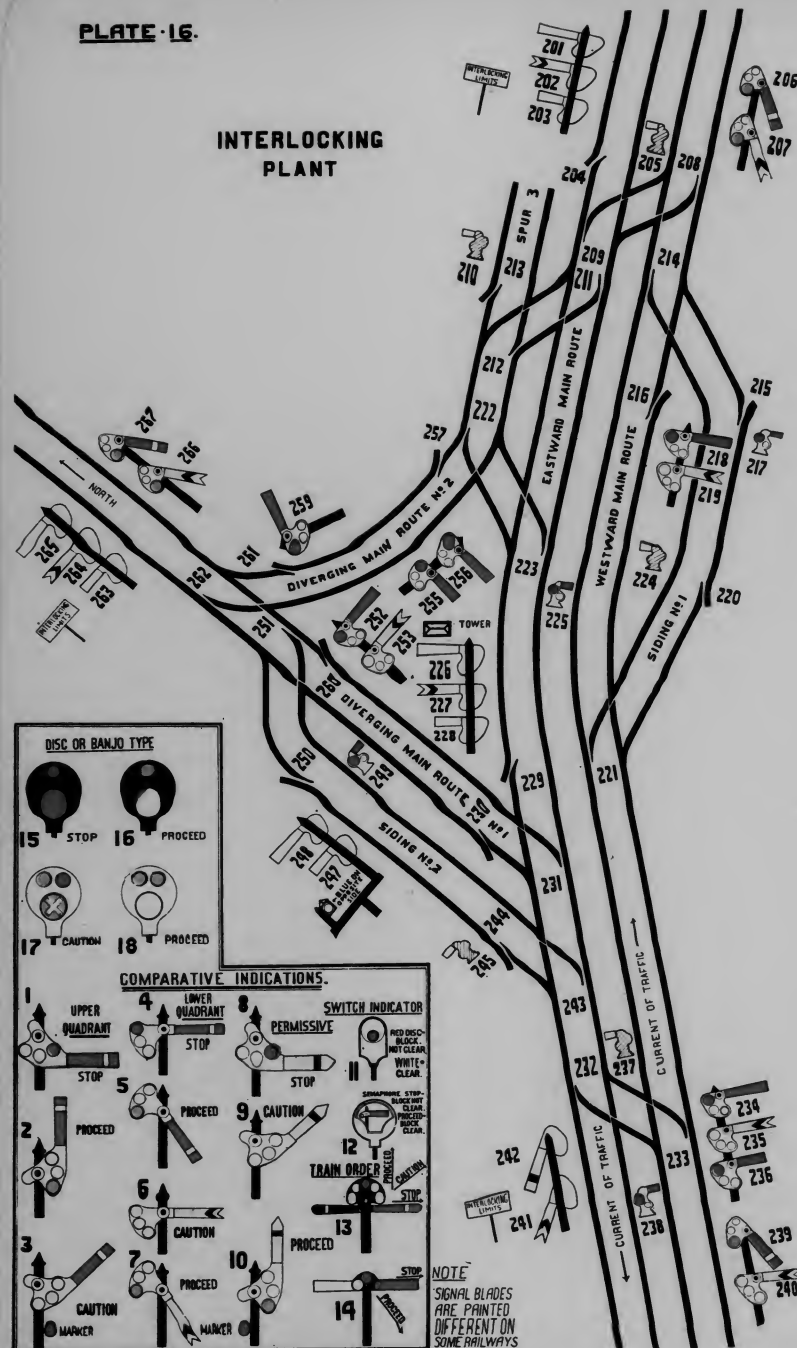
Signal 265 takes you over diverging main route No. 1 to Signal 248, and Signal 248 continues the move to eastward main route to Automatic Home Signal 242. Distant Signal 264 indicates position of Home Signal 248.

Short Arm Signal 263 takes you into Siding 2. Short Arm Signal 247 takes you over eastward main route and through crossover of Switches 232 and 233 to westward main route.

Dwarf Signal 245 takes you out of Siding 2 to eastward main route or through crossover of Switches 232 and 233 to westward main route.



PLATE 16.



Dwarf Signal 224 takes you out of Siding 1 against current of traffic on westward main route to Signal 237.

Dwarf Signal 237 takes you against current of traffic on westward main route through interlocking limits.

Dwarf Signal 210 takes you from Spur 3 to diverging main route No. 2 to Signal 259 or to eastward main route to Signal 226.

Dwarf Signal 205 takes you through crossover switches to diverging main route No. 2 to Signal 259 or to eastward main route to Signal 226 or against current of traffic on westward main route to Signal 237 or into Siding 1.

**DESCRIPTION INTERLOCKING PLANT WESTWARD MOVEMENTS—PLATE 16.**

Signal 234 takes you over westward main route to Signal 218, and Signal 218 continues the move and takes you out of interlocking limits to Automatic Home Signal 206. Distant Signal 235 indicates position of Signal 218. If Signal 218 is at proceed Distant Signal 219 indicates position of Automatic Home Signal 206. If Signal 218 indicates stop, Signal 219 indicates caution regardless of position of Signal 206.

Short Arm Signal 236 takes you over Switches 233 and 232 against current of traffic on eastward main route through Switch 231 and over diverging main route No. 1 to Signal 252, and Signal 252 continues the move and takes you out of interlocking limits to Automatic Home Signal 267. If Signal 252 is at proceed Distant Signal 253 indicates position of Automatic Home Signal 267. If Signal 252 indicates stop Distant Signal 253 indicates caution regardless of position of Signal 267.

Short Arm Signal 236 also takes you over Switches 233, 232 and 243 to Siding 2, or against current of traffic on eastward main route to Signal 225 or to Siding 1.

Short Arm Signal 263 takes you over diverging main route No. 2 to Signal 256, and Signal 256 takes you through crossovers to westward main route to Automatic Home Signal 206.

Short Arm Signal 255 takes you to Spur 3 or against current of traffic on eastward main route out through interlocking limits.

Short Arm Signal 203 takes you from eastward main route over Switches 211 and 212 and over diverging main route No. 2 to Signal 259, and Signal 259 continues the move out of interlocking limits to Automatic Home Signal 267.

Dwarf Signal 238 takes you against current of traffic on eastward main route to Signal 225 or on diverging main route No. 1 to Signal 252, or to Siding 2.

Dwarf Signal 225 takes you against current of traffic on eastward main route through interlocking limits, or to Spur 3, or on eastward main route through crossover of Switches 209 and 208 to westward main route.

Dwarf Signal 217 takes you from Siding 1 to westward main route.

Dwarf Signal 249 takes you from Siding 2 to Automatic Signal 267.

#### **DESCRIPTION OF COMPARATIVE SIGNAL INDICATIONS—PLATE 16.**

Semaphores 1, 2, 3, 4, 5, 6 and 7 belong to the absolute automatic block signal system and Signals 8, 9 and 10 to the permissive system.

Positions shown in Figures 1, 2 and 3 are given by one semaphore, and of the upper quadrant system. It requires two semaphores to give the same indications with the lower quadrant system as shown by Figures 4, 5, 6 and 7 unless the lower quadrant signal is a three position signal. Positions in Figures 4 and 5 are made by one semaphore and positions in Figures 6 and 7 are made by a separate semaphore. The semaphore shown in Figures 6 and 7 may be attached to the same mast (under the semaphore shown in Figures 4 and 5), or may be placed on a separate mast. Semaphores 6 and 7 work in conjunction with Semaphores 4 and 5 except where they are used only as a protection to obscure switches.

Under the upper quadrant system the semaphores of signals protecting switches indicate one of two positions, either proceed with caution as shown by No. 3, or proceed as shown by No. 2. When in caution position, it indicates switch is set for siding or diverging route, and when in proceed position, it indicates switch is set for main track or route.

When a permissive block signal indicates stop, train will stop and if caution or clear signal is not displayed, train may, if it has other authority under the rules, proceed under control expecting to find the block occupied, switch open, rail broken or track otherwise obstructed.

With the absolute block system, under the same conditions, train may proceed only under flag protection or as required by rule governing the absolute block. (See Rule 509), (old rule 504).

The marker light on the mast of Signal 3 not only indicates the location of the signal, but also indicates that it is an absolute block signal owing to the light being directly under the signal light.

The marker on the mast of Permissive Signal 10 is on the opposite side of the mast which places the two lights diagonal to distinguish the permissive from the absolute signal.

Disc switch indicator on double track, when showing a red disc indicates that the block it governs is occupied, or a switch open. When a white disc is displayed, it indicates the block is clear. When it governs a crossover between main track and siding, it shows the condition of adjacent main track.

When the semaphore indicator is used the position of the small semaphore applies to condition of the track the same as the disc of the disc indicator.

The three position upper quadrant train order signal (Fig. 12) is used both for train orders and manual block purposes. The caution position authorizes two or more trains moving in the same direction to occupy a block at the same time.

The two position lower quadrant train order signal is the usual type.

#### **DISK TYPE OF SIGNALS.**

Home Signal 15 indicating STOP shows a red curtain in the large circular opening by day and a red light in the small opening at night.

Home Signal 16 indicating PROCEED shows a white curtain in the large circular opening by day and a green light in the small opening at night.

Distant Signal 17 indicating CAUTION shows green curtain with a white cross in the large circular opening by day and a green light to the left and red light to the right in the two small openings at night.

Distant Signal 18 indicating PROCEED shows a white curtain in the large circular opening by day and a green light in both of the small openings at the top at night.

#### QUESTIONS AND ANSWERS ON INTERLOCKING.

##### PLATE 16

**Q. Where would Signal 234 take you?**

**A. On westward main route to Signal 218.**

**Q. Where would Signal 236 take you?**

**A. Through Crossover Switches 233 and 232 on to eastward main route against current of traffic to Signal 225, or through Switch 231 on to diverging main route No. 1 to Signal 252, or through Switch 243 on to Siding 2.**

**Q. Where would Signal 238 take you?**

**A. On eastward main route against current of traffic to Signal 225, or through Switch 231 on to diverging main route No. 1 to Signal 252, or through Switch 243 on to Siding 2.**

**Q. Where would Signal 249 take you?**

**A. From Siding 2 on to diverging main route No. 1 to Automatic Signal 267.**

**Q. Where would Signal 225 take you?**

**A. On eastward main route against current of traffic through interlocking plant, or through Crossover Switches 209 and 208 on to westward main route to Automatic Signal 206, or through Crossover Switches 223, 222, 212, 211, 209 and 208 on to westward main route to Automatic Signal 206, or through Crossover Switches 223, 222, 212 on to Spur 3, or through Crossover Switches 223, 222, 212 and 211 to eastward main route against current of traffic through interlocking plant.**

**Q. Where would Signal 217 take you?**

**A. From Siding 1 on to westward main route to Automatic Signal 206.**

**Q. Where would Signal 218 take you?**

**A. On westward main route to Automatic Signal 206.**

**Q. Where would Signal 256 take you?**

**A. Through Crossover Switches 212, 211, 209 and 208 on to westward main route to Automatic Signal 206.**

**Q. Where would Signal 255 take you?**

**A. Through Crossover Switches 212 and 211 on to eastward main route against current of traffic through interlocking plant, or on to Spur 3.**

**Q. Where would Signal 259 take you?**

**A. From diverging main route No. 2 on to diverging main route No. 1 to Automatic Signal 267.**

**Q. Where would Signal 252 take you?**

**A. On diverging main route No. 1 to Automatic Signal 267.**

**Q. Where would Signal 201 take you?**

**A. On eastward main route to Signal 226.**

**Q. Where would Signal 203 take you?**

**A. Through Crossover Switches 211 and 212 on to diverging main route No. 2 to Signal 259, or through Crossover Switches 211, 212, 222 and 223 to Signal 226.**

**Q. Where would Signal 205 take you?**

**A. Through Crossover Switches 208 and 209 on to eastward main route to Signal 226, or through Crossover Switches 208, 209, 211 and 212 on diverging main route No. 2 to Signal 259, or on westward main route against the current of traffic to Signal 237, or through Switch 214 on to Siding 1, or through Crossover Switches 208, 209, 211, 212, 222, and 223 on to eastward main route to Signal 226.**

**Q. Where would Signal 224 take you?**

**A. From Siding 1 on to westward main route against current of traffic to Signal 237.**

**Q. Where would Signal 237 take you?**

**A. On westward main route against the current of traffic through the interlocking plant.**

**Q. Where would Signal 210 take you?**

**A. From Spur 3 on to diverging main route No. 2 to Signal 259 or through Crossover Switches 222 and 223 on to eastward main route to Signal 226.**

**Q. Where would Signal 226 take you?**

**A. On eastward main route to Automatic Signal 242.**

**Q. Where would Signal 228 take you?**

**A. Through Crossover Switches 232 and 233 on to westward main route through interlocking plant.**

**Q. Where would Signal 265 take you?**

**A. On diverging main route No. 1 to Signal 248.**

**Q. Where would Signal 263 take you?**

**A. Through Switch 262 on to diverging main route No. 2 to Signal 256, or through Switch 251 on to Siding 2.**

**Q. Where would Signal 248 take you?**

**A. From diverging main route No. 1 on to eastward main route to Automatic Signal 242.**

**Q. Where would Signal 247 take you?**

**A. From diverging main route No. 1 through Crossover Switches 232 and 233 on to westward main route through interlocking plant.**

**Q. Where would Signal 245 take you?**

**A. On to eastward main route to Automatic Signal 242, or through Crossover Switches 232 and 233 on to westward main route through interlocking plant.**



**THE ABSOLUTE-PERMISSIVE BLOCK SYSTEM—  
PLATE 17.**

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The Absolute-Permissive Block System is unlike other Systems in that the stop control of a signal extends to a certain point when the train is running in the direction in which the signal governs and to another point when that train is running in the opposite direction, that is, block for opposing movements is from siding to siding, for following movements from signal to signal. There is usually one stop and one caution signal to the rear of every train. A caution indication precedes every stop indication, except when the main track is fouled at a station or track circuit broken after a train passes the last signal preceding the one governing the entrance to the station.

Under other Systems in order to get the necessary protection between opposing trains the signals must be so placed that they space trains moving in the same direction further apart than this System. Under the protection afforded opposing trains by other Systems, if a train overlooks another the opposing trains are not stopped by block signals until they have reached a point between stations, and that necessitates the backing up of one train perhaps several miles to let the other by.

Under the A-P-B System opposing trains are held a station apart or, in other words, they do not have an opportunity to meet between stations unless a signal is disregarded.

The square end signals are absolute or starting signals and the pointed end signals are permissive signals. Starting signals in addition to being square on the end are designated on some roads by a stationary arm below the active one and on others by a round disc or marker light six feet below the semaphore.

All signals between stations are permissive (or spacing) signals the same as signals on double track, and the practice of a train having to proceed through blocks preceded by a flagman has been almost eliminated. If an absolute or starting signal at a station is in stop position the train can immediately get into communication with

Dispatcher and receive instructions if telephones are provided at the absolute or starting signal.

When a train is stopped by a permissive signal, if caution or clear is not displayed, train may proceed under control expecting to find block occupied, a switch open, track broken or otherwise obstructed, provided such move can be made without conflicting with operating rules.

Referring to Plate 17, when No. 2 passed Point T or into Overlap at Station A, Signal A-11, (the absolute or starting signal) at B, and also all westward permissive signals between B and A were placed in stop position for an opposing train, thus holding an opposing train at B instead of permitting two opposing trains to meet at signals between stations.

In order to avoid opposing trains passing Signals A-6 and A-11 at the same moment an overlap is necessary at stations.

No. 2 between Signals A-6 and P-8 holds Signal A-6 at "stop" and Signal P-4 at "caution" behind it, permitting a following train to pass Signal P-4 and run with caution to and stop at Signal A-6, unless by that time No. 2 has passed Signal P-8 (or out of overlap beyond), placing it at "stop" and changing Signal A-6 to "caution". No. 2 also holds opposing Signals P-7, P-9 and A-11 at "stop" and, in addition, Signal P-13 and P-15 at "caution" against No. 1. If the distance between A-11 and P-13 is less than maximum breaking distance, then Signal P-15 gives ample protection. If No. 2 passes Signal P-10 and stops at point indicated by star, Signal P-10 would indicate "stop" and Signal P-8 "caution", and Signals P-9 and P-7 "proceed". Assuming that No. 2 should desire to back up from this point to A it will find Signals P-9 and P-7 in proceed position permitting it to proceed westward if no opposing eastward train has arrived at A. No. 2 would have Signal A-11 at "stop" and P-13 and P-15 at "caution". After No. 2 backs by Signal P-9 it establishes its direction as a westward train and Signals P-8 and A-6 would indicate "stop" and Signals P-4 and P-2 "caution", protecting it against opposing eastward trains. No. 2 after backing by Signal P-9 has Signals P-9 at "stop" and A-11 at "caution", protecting No. 2 to rear while backing up and permitting Signals P-13 and P-15 to go to "proceed".



After No. 2 stops at point indicated by star and desires to back up and Signal P-9 indicates "stop", it should stop and proceed following a flagman as the stop indication of Signal P-9 may mean an opposing train has passed Signal A-6 in proceed position before No. 2 started backward. If this is not done No. 2 would be proceeding under caution from Signal P-9 and the opposing eastward train proceeding at speed against it if between Signals A-6 and P-8. Otherwise the opposing trains would meet under caution signals. If train opposing No. 2 while No. 2 is backing up, had not reached Signal P-8 at the time No. 2 backs by Signal P-9 at caution they could meet between Signals P-7 and A-6, one moving at caution and the other at speed.

No. 3 after meeting No. 4 at D has switch open ready to head out thus placing all opposing eastward signals between C and D in stop position and Signal P-18 at "caution". The same condition could exist by a defective track circuit. Were it not for the position of No. 1, Signal P-16 would also indicate "caution".

Point R at Station E is where an opposing train (No. 5) would cause all opposing (eastward) signals between D and E to indicate "stop", holding opposing train (No. 4) at D.

On arrival of an eastward (superior direction) train at Point S at Station D all opposing signals between E and D indicate "stop", holding opposing trains a station apart.

If No. 5 at Station E occupies main track west of Point R to meet No. 4 before No. 4 passes Signal A-28 at east switch at D, No. 5 must push the button at E to release Signals A-28 and P-30 and to place P-32 at "caution", as shown, to permit No. 4 to proceed from D to E without being preceded by a flagman.

If No. 5 remained east of overlap at Point R the use of the push button would not be necessary.

It is claimed that overlaps at stations are not absolutely necessary under the A-P-B System. If not installed the use of the push button is not required. If such overlaps were not used No. 5 at E could occupy the main track between switches at E and only hold Signal P-32 at "caution" and P-34 at "stop" against No. 4. Where there are

no station overlaps there is a possibility of No. 5 overlooking its meet at E and passing Signal A-33 at the exact moment No. 4 passes Signal A-28, leaving the opposing trains protected only by Signals P-30 and P-31 which permit the trains to meet under caution indication only.

*"No. 4 take siding meet No. 5 at E".*

No. 5 arriving at E and passing Overlap Point R before No. 4 passes Signal A-28 at D placed all eastward signals between D and E against No. 4 as shown by dotted outline positions of Signals A-28, P-30 and P-32. No. 4 placed all westward signals between E and D against No. 5 when it reached its present position at Station D. In order not to cause No. 4 to follow a flagman from D it was necessary for No. 5 to push the button at west end of Station E to release eastward Signals A-28, P-30 and P-32 as shown, or place them in same position as they would be if an eastward train was running ahead of No. 4 and was in same position No. 5 now occupies, thus permitting No. 4 to proceed from D to E in the usual manner. If a westward train was in the position as shown by dotted outline at Point U, No. 5 at E could not release Signals A-28 and P-30 from "stop" to their present position until this train passed Signal A-28.

When No. 6 opens east switch at F to head out it has Signal P-42 to west end of F at "stop" and Signal P-40 at "caution" to protect it against following trains while heading out, also all westward signals between G and F are placed in "stop" position if station overlaps are provided at F and G. If owing to an oversight on part of No. 7 it should open west switch at G to head out at the same time No. 6 opened switch at F (as shown) it would place all eastward signals between F and G at "stop" against No. 6 and neither No. 6 nor No. 7 could leave their respective stations. By restoring either switch to its normal position it would cause signals in one direction to indicate "proceed", permitting one of the trains to move. If there is an overlap at G, but none at F, then if Nos. 6 and 7 opened the switches at the same moment No. 7 would cause all opposing signals F to G to indicate "stop" against No. 6, but when No. 6 opened switch at F it

only affected Signals P-43 and P-45, leaving Signals P-47 and A-49 in their normal position (proceed) permitting No. 7 to move G to F, in which case Signal A-44 in stop position would prevent No. 6 from leaving F.

There is an ascending grade westward commencing at a point near Signal P-53 and extending to Signal P-51 at east switch at G as indicated by the arrow. In order to permit trains to run closer together on the grade, a grade (or tonnage) semaphore is placed below Signal P-53 (some Railroads denote grade signal by placing a "G" upon a disc attached to a semaphore blade) and only trains of a certain tonnage are permitted to accept it.

After a westward train passes Signal P-53 the grade signal underneath indicates "caution" permitting a following train to enter block between Signals P-53 and P-51 behind No. 9 (as shown by dotted outline) without stopping heavy tonnage trains ascending grades. The normal position of grade signal is horizontal.

A study of No. 8 and No. 11 approaching meeting point at Station I shows the opposing and rear protection.

Assuming Nos. 11 and 13 are not in their present position, after Extra is clear at Spur I, all signals, between Stations I and J assume their normal positions. Before again occupying main track Extra must note position of Signals P-73 and P-74, if in view. If Signal P-73 indicates "stop", there is a train between I and Spur 1. If Signal P-74 is at "stop", there is a train between J and Spur 1. The extra must not leave Spur 1 unless both Signals P-73 and P-74 (if they can be seen) indicate "proceed", or the switch indicator indicates that the block is clear in case signals can not be seen. After the Extra enters main track all signals between I and J, both ways, will indicate "stop" until the Extra's direction is established. If Extra moves westward toward I, after it has passed Signal P-71, Signal P-71 will go to "stop" and P-73 to "caution". After the Extra passes P-71 it establishes its direction as a westward train and also releases Signals P-72 and P-74, Signals A-66, P-68 and P-70 remaining at "stop" to protect it against opposing eastward trains. If the Extra moves eastward toward J after it passes Signal P-74 causing same to indicate "stop", it

establishes its direction as an eastward train and after it passes Signal P-74, Signal P-72 will indicate "caution" and Signals P-70, P-68 and A-66 will go to "proceed", thus permitting an eastward train to follow.

Train order signals where normal position is proceed are some times connected with the entering signal at stations. When such is the case if the eastward train order signal is at "stop" as shown at J, the entering Signal P-76 indicates "caution".

When a train is stopped by an absolute or starting signal and a clear or caution signal is not immediately displayed, conductor ( or engineman, if no conductor) should confer with the Dispatcher. If unable to communicate with the Dispatcher, it may proceed when preceded by a flagman to the next signal displaying a proceed indication. See Rule 509 of 1915 Revision of the Standard Rules (Old Rule 504).

Note: Some roads require the train to flag to the first proceed or caution signal only.

### QUESTIONS AND ANSWERS—ABSOLUTE-PERMISSIVE BLOCK SYSTEM.

**Q. What is an absolute block signal?**

**A.** A signal that requires a train to stop and stay when it is in stop position, unless it is proceeded by a flagman to the next clear signal. It must be considered as indicating an opposing movement, although it may be held at "stop" by a preceding train, broken rail or other condition interfering with the track circuit.

**Q. What is a permissive block signal?**

**A.** A signal that requires a train to stop when it is in stop position, and may then proceed under control to the next signal, assuming there is a train in the same block moving in the same direction, or track obstructed.

**Q. What is the difference in the shape of the semaphores of the absolute and the permissive signals?**

**A.** The absolute block signal semaphore blade is square on the end and the permissive pointed.

**Q. At night what distinguishing feature between the absolute and permissive signals?**

**A.** On the absolute signal the light in the signal and the marker light on the mast are in a vertical line. On the permissive signal the light in the signal and the marker light on the mast are in a line diagonally downward to the left.

**Q. If marker light is not burning how should train be governed?**

**A.** Relight it if practicable and notify Signal Maintainer and Superintendent.

Q. If signal light is not burning, how should train be governed?

A. Stop if necessary to ascertain its position and whether it is an absolute or permissive signal, be governed by its indication and report it, giving signal number to Signal Maintainer and Superintendent.

Q. What is a station overlap?

A. A section of track at a station within which a train will cause all signals protecting an opposing movement between that station and the next to indicate "stop".

Q. What effect would this have if a train is to meet another and passes into the station overlap at the meeting point before opposing train leaves the next station?

A. It would cause opposing train to flag to the meeting point unless otherwise directed, or signals released by use of push button as shown at Station E.

Q. How may this be overcome?

A. By pushing the push button provided for that purpose at the meeting point (see Station E) or remaining back of the overlap.

Q. Should there be a train between the meeting point and the next station in advance moving in same direction as the train that has passed into the overlap (see No. 5 at E) would the push button release the necessary signals to allow opposing train (No. 4) to proceed?

A. No, the train moving ahead of No. 5, as shown by dotted outline would hold opposing signals at "stop" for its own protection.

Q. Is there always a caution indication preceding a stop signal?

A. Yes, usually, if train has not passed signal preceding the signal that indicates stop before it assumed that position.

Q. What effect would the opening of a switch to head out have on signals governing an opposing train, if there is a station overlap?

A. It would place all signals between stations at stop against opposing train.

Q. If there is no station overlap, what opposing signals would the opening of a switch effect?

A. It would place the first opposing signal beyond the switch at "stop" and the signal in advance of it at "caution".

Q. If no station overlap, when does a train cause all opposing signals to indicate "stop" to next station in advance?

A. When train passes the absolute (starting) signal at the station.

Q. How close may trains moving in the same direction run?

A. If signal indicates caution trains may run one block apart. If permissive signal indicates stop, after stopping it may proceed under control into the same block following preceding train.

Q. What is a grade signal and how should trains be governed?

A. A signal placed on a mast below automatic signal at the foot of a grade (normal position horizontal) to permit a following train to enter the block without stopping when such signal indicates caution and signal above stop when grade signal is horizontal and signal above indicates proceed the block ahead is clear.

Q. If a train ahead, what indication would these signals give?

A. The automatic signal would indicate stop and the grade signal proceed with caution, thus permitting a following train with not less than the specified tonnage to pass into the block without stopping on the grade, but with the understanding there is another train ahead in same block.

Q. Is it possible for trains approaching a station to receive a clear signal and then find the next signal (entering station) at stop?

A. Yes, it is possible, the main track may be fouled after train passes the clear signal.

Q. Where switch indicators are installed must they be consulted before opening a switch?

A. Yes.

Q. If switch indicator indicates stop, what does it mean?

A. There is a train in the territory governed by that indicator, or a switch is open.

Q. Do the indications displayed by a switch indicator relieve enginemen and trainmen from protecting their trains as required by the rules?

A. No.

Q. When has a train in this case established its direction placing the signals for rear protection in their proper position permitting a following movement in the usual manner?

A. After passing the first signal in direction train is moving.

Q. What position are all signals in before passing the first signal in this case?

A. All signals in both directions are in stop position to the next station.

Q. If train should use a spur in clearing main track and switch indicator indicates clear, may train again enter main track?

A. Yes.

Q. When a train order signal (normal position proceed) is connected with absolute-permissive block system and indicates stop, what position is indicated by the signal entering station from direction to which train order signal applies?

A. Caution.

Q. When a train (No. 2) causes opposing signals to indicate stop to the next station (B), Plate 17, what is the position of signals (P-13 and P-15) beyond Station B to which opposing train is moving?

A. Caution.



**Q.** In the A-P-B System at what points are absolute and permissive signals located?

**A.** Absolute signals at both ends of siding on the leaving side only, permissive signals at all other locations.

### **STANDARD (1915 REVISION) BLOCK SIGNAL RULES FOR TRAINMEN AND ENGINEMEN.**

Block Signals for a track apply only to trains moving with the current of traffic on that track.

When a train is stopped by a Stop-signal it must stay until authorized to proceed, or in case of failure of means of communication it may proceed when preceded by a flagman to the next signal displaying a proceed indication.

When a train is stopped by a Stop and Proceed-signal it may proceed—

(A) On single track ———. (*Under conditions as may be required by local rules*).

(B) On two or more tracks, at once at slow speed, expecting to find a train in the block, broken rail, obstruction or switch not properly set.

When a train is stopped by a block signal which is evidently out of order, and not so indicated, the fact must be reported to ———.

Both switches of a crossover must be open before a train starts to make a crossover movement, and the movement must be completed before either switch is restored to normal position.

Where switch indicators are used, the indications displayed do not relieve enginemen and trainmen from protecting their train as required by the rules.

Block signals govern the use of the blocks, but, unless otherwise provided, do not supersede the superiority of trains; nor dispense with the use or the observance of other signals whenever and wherever they may be required.

### **STANDARD (1915 REVISION) INTERLOCKING RULES FOR TRAINMEN AND ENGINEMEN.**

If a signal, permitting a train to proceed, after being accepted, is changed to a Stop signal before it is reached, the stop must be made at once. Such occurrence must be reported to ———.

Train or engines must not pass a signal indicating Stop, except as provided in the next paragraph.

Trains or engines must not proceed on hand signals as against interlocking signals until enginemen and trainmen are fully informed of the situation and ———. (*Other conditions that may be required*).

The engineman of a train which has parted must sound the whistle signal for Train-parted on approaching an interlocking plant.

An engineman receiving a Train-parted signal from a signalman must answer by the whistle signal for Train-parted.

When a parted train has been re-coupled the signalman must be notified.

Sand must not be used over movable parts of an interlocking plant.

Conductors must report to ——— any unusual detention at interlocking plants.

Trains or engines stopped by the signalman in making a movement through an interlocking plant, must not move in either direction until they have received the proper signal from him.

A reverse movement within the limits of an interlocking plant, or a forward movement after making a reverse movement, must not be made without the proper interlocking signal or permission from the signalman.



PLATE 18

301, 401

STANDARD BLOCK SIGNAL RULES.

MANUAL BLOCK SYSTEM - CONTROLLED MANUAL BLOCK SYSTEM

THREE-POSITION BLOCK SIGNALS.

The aspects shown are typical and may be given in any one of the other quadrants. Each road should show the aspects and colors of lights it uses.

THE FOLLOWING SIGNALS WILL APPEAR WHERE CONDITIONS REQUIRE THEIR USE.

301A, 401A.

**BLOCK IS NOT CLEAR**

**INDICATION-STOP.**  
**NAME-STOP-SIGNAL.**

301C, 401C.

**BLOCK IS CLEAR**

**INDICATION-PROCEED.**  
**NAME-CLEAR-SIGNAL.**

301G, 401G.

**BLOCK IS OCCUPIED.**

**INDICATION-PROCEED WITH CAUTION PREPARED TO STOP SHORT OF TRAIN OR OBSTRUCTION.**  
**NAME-PERMISSIVE-SIGNAL.**

302, 402.

TWO-POSITION HOME BLOCK SIGNALS.

The aspects shown are typical. Each road should show the aspects and colors of the lights it uses.

302A, 402A.

**BLOCK IS NOT CLEAR.**

**INDICATION-STOP.**  
**NAME-STOP-SIGNAL.**

302C, 402C.

*GO DOWN OR MORE BELOW*  
*INDICATION-STOP.*

**BLOCK IS CLEAR.**

**INDICATION-PROCEED.**  
**NAME-CLEAR-SIGNAL.**

303, 403.

TWO-POSITION DISTANT BLOCK SIGNALS.

303J, 403J.

**HOME SIGNAL IS NOT CLEAR.**

**INDICATION-APPROACH HOME SIGNAL WITH CAUTION.**

**NAME-CAUTION-SIGNAL.**

303K, 403K.

**HOME SIGNAL INDICATES PROCEED.**

**INDICATION-PROCEED.**  
**NAME-CLEAR-SIGNAL.**

501

- AUTOMATIC BLOCK SYSTEM.-

THREE POSITION BLOCK SIGNALS.

The aspects shown are typical and may be given in any one of the other quadrants. Each road should show the aspects and colors of lights used.

501A.

**BLOCK IS NOT CLEAR.**

**INDICATION-STOP.**  
**NAME-STOP-SIGNAL.**

501A.

**BLOCK IS NOT CLEAR.**

**INDICATION-STOP; THEN PROCEED.**  
**NAME-STOP AND PROCEED-SIGNAL.**

501B.

**BLOCK IS CLEAR; SECOND BLOCK IN ADVANCE IS NOT CLEAR.**

**INDICATION-APPROACH NEXT SIGNAL PREPARED TO STOP.**  
**NAME-APPROACH SIGNAL.**

**NOTE TO RULES 303, 403, 503 and 603-Where Distant Block Signals are not used Rules 303, 403, 503 and 603 will be omitted.**

PLATE 19









<p>501C   <b>TWO OR MORE BLOCKS ARE CLEAR.</b>  <b>INDICATION-PROCEED.</b>  <b>NAME-CLEAR SIGNAL.</b></p>	
<p>501E   <b>TWO BLOCKS ARE CLEAR.</b>  <b>INDICATION-APPROACH NEXT SIGNAL AT RESTRICTED SPEED.</b>  <b>NAME-APPROACH-RESTRICTING-SIGNAL.</b></p>	<p>501F   <b>TWO OR MORE BLOCKS ARE CLEAR.</b>  <b>INDICATION-PROCEED AT RESTRICTED SPEED.</b>  <b>NAME-CLEAR-RESTRICTING-SIGNAL.</b></p>
<p>501G   <b>BLOCK IS OCCUPIED OR SWITCH IS SET TO DIVERGE.</b>  <b>INDICATION-PROCEED AT SLOW SPEED PREPARED TO STOP SHORT OF TRAIN OR OBSTRUCTION.</b>  <b>NAME-PERMISSIVE-SIGNAL.</b></p>	
<p>502 <b>TWO-POSITION HOME BLOCK SIGNALS.</b>  The aspects shown are typical. Each road should show the aspects and colors of lights it uses.</p>	
<p>502AA   <b>BLOCK IS NOT CLEAR.</b>  <b>INDICATION-STOP; THEN PROCEED.</b>  <b>NAME-STOP AND PROCEED-SIGNAL.</b></p>	<p>502G   <b>BLOCK IS CLEAR.</b>  <b>INDICATION-PROCEED.</b>  <b>NAME-CLEAR-SIGNAL.</b></p>
<p>503 <b>TWO-POSITION DISTANT BLOCK SIGNALS.</b></p>	
<p>503J   <b>BLOCK IS NOT CLEAR OR TRACK IS OBSTRUCTED BETWEEN DISTANT AND HOME SIGNAL.</b>  <b>INDICATION-APPROACH HOME SIGNAL WITH CAUTION.</b>  <b>NAME-CAUTION-SIGNAL.</b></p>	<p>503K   <b>BLOCK IS CLEAR.</b>  <b>INDICATION-PROCEED.</b>  <b>NAME-CLEAR-SIGNAL.</b></p>

PLATE 20

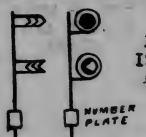
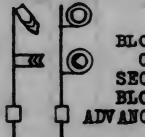
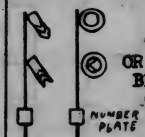
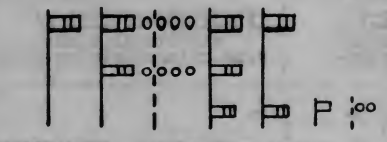
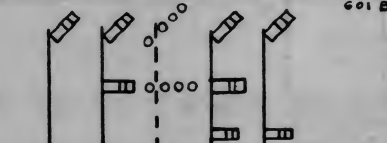
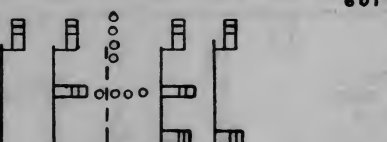
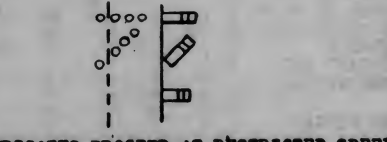
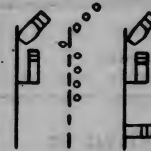
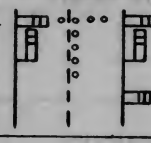
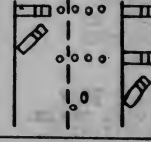
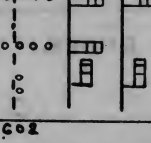
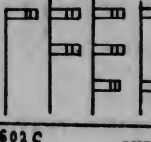
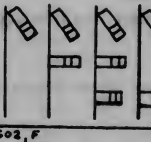
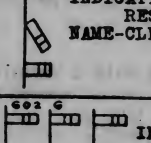
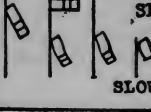
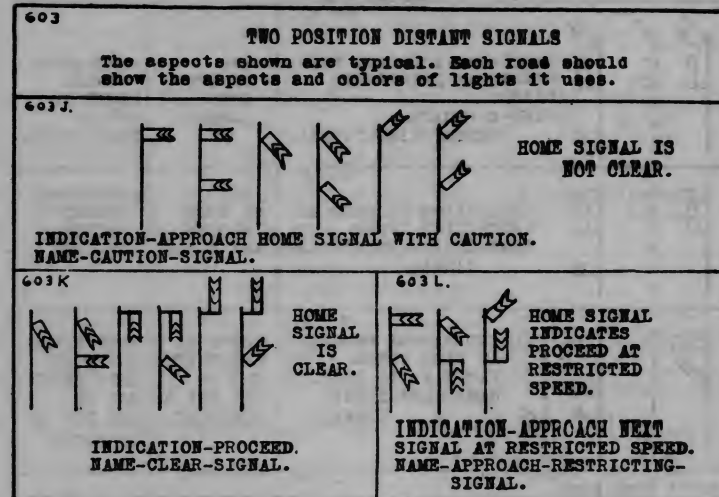
504 TWO-POSITION HOME AND DISTANT BLOCK SIGNALS.			
 BLOCK IS NOT CLEAR. INDICATION-STOP; THEN PROCEED. NAME-STOP-THEN-PROCEED-SIGNAL.	 BLOCK IS CLEAR SECOND BLOCK IN ADVANCE NOT CLEAR. INDICATION-APPROACH NEXT SIGNAL PREPARED TO STOP. NAME-APPROACH-SIGNAL	 TWO OR MORE BLOCKS CLEAR. INDICATION-PROCEED. NAME-CLEAR-SIGNAL.	
- INTERLOCKING - THREE-POSITION SIGNALS.			
The aspects shown are typical and may be given in any of the other quadrants. Each road should show the aspects and colors of lights it uses.		FOR SEMI-AUTOMATIC SIGNALS SIGNAL WILL APPEAR WHEN	FOR NON-AUTOMATIC SIGNALS SIGNAL WILL APPEAR WHEN
 INDICATES-STOP. NAME-STOP-SIGNAL.	BLOCK IS NOT CLEAR.	ROUTE IS NOT SET.	
 INDICATES-APPROACH NEXT SIGNAL PREPARED TO STOP. NAME-APPROACH-SIGNAL.	BLOCK IS CLEAR SECOND BLOCK IN ADVANCE NOT CLEAR.	ROUTE IS SET NEXT SIGNAL IS NOT CLEAR	
 INDICATION-PROCEED. NAME-CLEAR-SIGNAL.	TWO OR MORE BLOCKS ARE CLEAR	ROUTE IS SET.	
 INDICATES-PROCEED AT RESTRICTED SPEED PREPARED TO STOP AT NEXT SIGNAL. NAME-RESTRICTING SIGNAL.	BLOCK IS CLEAR; SECOND BLOCK IN ADVANCE IS NOT CLEAR	RESTRICTED SPEED ROUTE IS SET; NEXT SIGNAL IS NOT CLEAR	

PLATE 21

 INDICATES-APPROACH NEXT SIGNAL AT RESTRICTED SPEED. NAME-APPROACH-RESTRICTING-SIGNAL.	TWO BLOCKS ARE CLEAR.	RESTRICTED SPEED ROUTE IS SET AT NEXT SIGNAL
 INDICATION-PROCEED AT RESTRICTED SPEED. NAME-CLEAR-RESTRICTING-SIGNAL.	TWO OR MORE BLOCKS ARE CLEAR	RESTRICTED SPEED ROUTE IS SET
 INDICATION-PROCEED AT SLOW SPEED PREPARED TO STOP. NAME-SLOW-SPEED-SIGNAL.	ROUTE IS SET; TRACK MAY OR MAY NOT BE OCCUPIED.	SLOW SPEED ROUTE IS SET; TRACK MAY OR MAY NOT BE OCCUPIED.
 INDICATION-PROCEED AT SLOW SPEED. NAME-CLEAR-SLOW-SPEED-SIGNAL.	BLOCK IS CLEAR.	SLOW SPEED ROUTE IS SET.
602 TWO-POSITION HOME SIGNAL. The upper quadrant aspects shown in Rules 602 C, 602 F and 602 G may be given in any one of the other quadrants.		
 INDICATION-STOP. NAME-STOP-SIGNAL.	BLOCK IS NOT CLEAR.	ROUTE IS NOT SET.
 INDICATION-PROCEED. NAME-CLEAR-SIGNAL.	BLOCK IS CLEAR.	ROUTE IS SET.
 INDICATION-PROCEED AT RESTRICTED SPEED. NAME-CLEAR-RESTRICTING-SIGNAL.	BLOCK IS CLEAR.	RESTRICTED SPEED ROUTE IS SET.
 INDICATION-PROCEED AT SLOW SPEED PREPARED TO STOP. NAME-SLOW-SPEED-SIGNAL.	ROUTE IS SET; TRACK MAY OR MAY NOT BE OCCUPIED.	SLOW SPEED ROUTE IS SET; TRACK MAY OR MAY NOT BE OCCUPIED.



## QUESTIONS AND ANSWERS—TRAIN RULES.

1 to 16 Inclusive.

Note: Examine on special rules of time-table and bulletins.

Q. Do special Rules, General Orders or Bulletins supersede the Book of Rules wherever they conflict?

A. Yes.

"Define Everything Under Head of Definitions".

Q. Have you a standard watch?

A. Yes.

Q. Within what variation of time should watch run?

A. Within a variation of thirty seconds.

Q. How often should watch be examined and certificate sent to designated Official?

A. (Consult your rules).

Q. How frequently should watch be compared with Standard Clock?

A. Daily, before commencing work.

Q. Must the time watch be compared be registered on prescribed form?

A. Yes.

Q. If held over night at station not equipped with a standard clock, how should conductor and engineman be governed?

A. Compare with a conductor or engineman who has compared that day with a standard clock. If impossible, obtain correct time from Dispatcher.

## QUESTIONS AND ANSWERS—RULE 4.

Q. What is a schedule?

A. That part of a time-table which prescribes class, direction, number and movement for a regular train.

Q. What is the date of regular train?

A. The date of its schedule at initial station.

Q. If No. 2 due to leave A at 11:30 P. M. Jan. 1st, does not leave until 1:00 A. M., Jan. 2nd, what is its date?

A. Jan. 1st.

Q. What is a Division?

A. That portion of a Railroad assigned to the supervision of a — (Generally the Superintendent).

Q. What is a Subdivision?

A. A portion of a Division, designated by time-table.

Q. If there are no Subdivisions designated, what is the unit of railroad?

A. Division.

Q. If there are Subdivisions designated by the time-table, what is the unit of railroad?

A. A Subdivision.

Q. If 12 hours has elapsed after the latest time printed in a schedule of the New, could such schedule of that date have any existence after New takes effect?

A. No.

Q. What is the difference between a time-table schedule and a train that runs under its authority?

A. A time-table schedule is time existence given a number to designate it from other schedules, and authorizes a train movement. Its existence ceases as it becomes more than 12 hours late at each station. The train is the equipment that moves over the Division, or Subdivision, as authorized by the schedule existence.

Q. When does a schedule exist?

A. When it becomes due.

Q. How long does a schedule exist?

A. Until more than 12 hours late.

Q. When Rule 4 refers to a schedule of a preceding (Old) time-table, does it mean one that is due or overdue, not exceeding 12 hours at the time of change?

A. Yes, one that actually exists and authorizes a train.

Q. If a schedule of Jan. 1st has been fulfilled may it again be fulfilled?

A. No.

Q. What is meant by "same day of leaving"?

A. If "daily" on the Old and "daily" on the New they would be the same day of leaving any day of the week. If "daily" on the Old and "daily except Sunday" on the New, or vice versa, they would not be the same day of leaving on Sunday, but would be, every other day of the week.

Q. If "daily except Saturday" on the Old and "daily except Sunday" on the New, could they be considered of the same day of leaving and how would it effect the schedule on Monday, Tuesday, Wednesday, Thursday or Friday?

A. They would be the same day of leaving Monday, Tuesday, Wednesday, Thursday and Friday, but would not on Saturday and Sunday.

Q. If on an opposing inferior train at B at 8:30 P. M. and No. 1 is due to leave A at 8:30 P. M., could you move against it without orders?

A. No.

Q. If No. 1 does not arrive at B until one hour late, would the opposing inferior train have to remain at B during that hour if it did not receive orders to move against No. 1; if so, why?

A. Yes, an opposing superior schedule exists authorizing an opposing superior train.

Q. May we have a train authorized (meaning a schedule in effect) without the equipment on the road under authority of the Old schedule.

A. Yes, without the equipment there is a train authorized if schedule is due and is not more than 12 hours late.

Q. Is it necessary that we have an authorized train or that a schedule is due or overdue not to exceed 12 hours at some station on the Old time-table at the time of change before a schedule of the New could be assumed?

A. Yes.

Q. If there is a train authorized under the Old at time of change, is it necessary to also have a train authorized under the New before the schedule of corresponding number may be assumed?

A. No, the schedule of the New which may be assumed may not be due to leave the station where it is to be assumed at the time of change, and the train may wait until it is due even though it is not due at any station under the New until after the New takes effect.

Q. If the schedule of the New, corresponding as required is not due or overdue at the time of change, when does it first exist?

A. At its leaving time, and dates from its initial station.

Q. Why may a train running on a schedule of the Old assume the schedule of the New that corresponds and becomes due on the New after the time of change?

A. Because it is the same schedule, and we may have one schedule in effect of one date and if it has been partly fulfilled under the Old the remainder of the schedule may be fulfilled under the New.

Q. If there is not a schedule on the preceding (Old) time-table corresponding in every particular as required by the rule with a schedule of the New, what would you consider the schedule of the New?

A. A new schedule of the New time-table.

Q. When does a schedule of the New first exist if no schedule on the Old corresponds?

A. At the first leaving time at initial station at or after New takes effect.

Q. In checking Old and New time-tables, what is one of the important things to consider first?

A. Note whether the limit of the Division, or Subdivision,

if subdivided, has been changed.

Q. Is it necessary that the schedule of the Old and New be of the same day of arriving?

A. No.

Q. What are the six requirements in which a schedule of the Old and New must be alike, or correspond, before a schedule of the New may be assumed?

A. NUMBER, CLASS, DAY OF LEAVING, DIRECTION, INITIAL AND TERMINAL STATIONS.

Q. If a schedule of the Old and New are alike in Number, Class, Day of Leaving, Initial and Terminal Stations, but they do not follow the same route, would they correspond?

A. No, direction means that they must follow the same route.

Q. How should train running under the Old be governed after New takes effect if the direction (route) is not the same?

A. Proceed under train orders.

Q. If a schedule of the Old of the same number as the New but of different route is due under the Old at time of change, although it may not have been fulfilled, has there been a schedule in effect at time of change?

A. Yes.

Q. What is first time such schedule exists under the New?

A. At the first leaving time under the New on the first date it is authorized following the date of the Old schedule.

Q. If on the New a station name has been changed would this prevent the New being assumed provided all other requirements are the same?

A. No, the change in the name of a station would not affect the route or direction.



**CORRESPONDING SCHEDULES OF THE OLD AND  
NEW TIME TABLES.**

Time at Stations Later on the New.

**PLATE A<sup>1</sup>**

**NEW TIME TABLE EFFECTIVE 1201 AM SUNDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	1		1
	DAILY		DAILY
A	1000PM	A	1100PM
B	1040PM	B	1140PM
C	1120PM	C	1220AM
D	1201AM	D	100AM
E	1250AM	E	150AM
F	140AM	F	240AM
G	220AM	G	320AM
H	A 300AM	H	A 400AM

**QUESTIONS AND ANSWERS—PLATE A 1.**

- Q. Do the schedules correspond in the six requirements?  
A. Yes.
- Q. Is there a train authorized (meaning a schedule in effect not fulfilled) under the Old time-table at time of change, 12:01 A. M. Sunday, and if so, where?  
A. Yes, at D.
- Q. Is there a schedule due or overdue (existing) on the New at time of change?  
A. Yes.

- 7 Q. At 12:01 A. M. Sunday, when must No. 1 of the New be considered as having taken effect?

A. At 11:00 P. M. Saturday, one hour and one minute before the change.

Q. Must No. 1's time on Old be exactly 12:01 A. M. at D in order that a train may be authorized?

A. No, if due at D at 11:50 P. M. and not fulfilled at D at 12:01 A. M., a schedule would exist as it is not 12 hours late at time of change.

Q. If No. 1's schedule of the Old is not fulfilled out of A before 12:01 A. M. Sunday, over what part of the Division or Subdivision is there a train authorized at time of change?

A. From A to D.

Q. As new time-table takes effect at 12:01 A. M. Sunday, what is the date of the last No. 1 existing out of A under the Old?

A. No. 1 of Saturday.

Q. What time is No. 1 of Saturday due to leave as printed on the New?

A. 11:00 P. M. Saturday.

Q. How many No. 1's of Saturday may exist?

A. One.

2 Q. Do you understand that it is only necessary to have a train authorized under the Old somewhere on the Division or Subdivision, if sub-divided, at 12:01 A. M. Sunday, in order that No. 1 of the New may be assumed?

A. Yes.

Q. If a train inferior to No. 1 is moving in the same direction and could clear No. 1's schedule time at D on the New, could it leave ahead of or pass No. 1 without orders?

A. Yes, it could pass No. 1 at D, between 12:01 A. M. of the Old and 1:00 A. M. of the New.

Q. If an opposing inferior train leaves H Saturday and reaches E at 11:45 P. M., how much time would it then have to go to D under the Old time table?

A. Sixteen minutes, less required clearance.

Q. If it is a 30-minute run, E to D, when could this opposing inferior train leave E, and how much time would it then have to go to D?

A. At 12:01 A. M. Sunday, and would have 59 minutes less required clearance to go to D against the New time.

Q. Would it be safe to assume that as No. 1 could not get out of D before 12:01 A. M. Sunday, and at that time the New would take effect, the inferior train could leave E at 11:45 P. M. and move against the New time at D (1:00 A. M.)?

A. It would be safe, but technically improper to move out of E without sufficient time to make D under the Old schedule which is yet in effect at 11:45 P. M.

# **CORRESPONDING SCHEDULES OF OLD AND NEW TIME-TABLES.**

Schedule of the Old Partly Fulfilled at Time of Change.

## **PLATE B1**

### **NEW TIMETABLE EFFECTIVE 1201 AM SUNDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	1		1
	DAILY		DAILY
A	1000 PM	A	1100 PM
B	1040 PM	B	1140 PM
C	1120 PM	C	1220 AM
D	1201 AM	D	100 AM
E	1250 AM	E	150 AM
F	140 AM	F	240 AM
G	220 AM	G	320 AM
H	300 AM	H	400 AM

## **QUESTIONS AND ANSWERS—PLATE B1.**

Q. Do the schedules correspond in the six requirements?

A. Yes.

Q. Is there a train authorized under the Old at time of change, 12:01 A. M. Sunday? If so, where?

A. Yes, at D.

Q. If a No. 1 of Saturday runs under the Old schedule from A to D, reaching D at 12:01 A. M. Sunday, as indicated by the arrow, what effect would this have on the corresponding portion of the New schedule of Saturday?

A. The corresponding portion of the New schedule of No. 1 of Saturday between A and D, as indicated by shaded portion, could not be used.

Q. Of what value is that portion of the Old, D to H, as indicated by shaded portion, after 12:01 A. M. Sunday?

A. Of no value.

Q. What takes its place?

A. The corresponding portion of the New from D to H as indicated by the arrow between the two schedules.

Q. What would No. 1, arriving at D at 12:01 A. M. Sunday, do?

A. Take siding at D and wait until due to leave on the New at 1:00 A. M., and proceed on the new time as indicated by the arrow.

Q. If No. 1 received an order to meet an opposing train between D and H while running under the Old, should the order be respected after No. 1 assumes the new time?

A. Yes, if an extra or if a regular train (not more than 12 hours late).

Q. If No. 1 received an order to meet No. 2 at G and there is no No. 2 under the New, how should No. 1 be governed?

A. Proceed, as there is then no No. 2 to meet.

Q. When would No. 1 of Saturday become 12 hours late at H?

A. At 4:00 P. M. Sunday.

# CORRESPONDING SCHEDULES OF OLD AND NEW TIME-TABLES.

Train Running Late on Old at Time of Change. Time  
on the New Later.

## PLATE C 1

### NEW TIMETABLE EFFECTIVE 1201 AM SUNDAY

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	1		1
	DAILY		DAILY
A	1000PM	A	1100PM
B	1040PM	B	1140PM
C	1120PM	C	1220AM
D	1201AM	D	100AM
E	1250AM	E	150AM
F	140AM	F	240AM
G	220AM	G	320AM
H	300AM	H	400AM

## QUESTIONS AND ANSWERS—PLATE C 1.

Q. Do the schedules correspond in the six requirements?

A. Yes.

Q. Is there a train authorized under the Old at time of  
change 12:01 A. M. Sunday?

A. Yes, at D, and if not fulfilled out of A, B or C before  
12:01 A. M., it would exist at any of those stations.

Q. If No. 1 leaves A Saturday under the Old and reaches  
C at 11:50 P. M. (11 minutes before the change), assuming that  
it is a 30 minute run, C to D, how should it be governed?

A. Remain at C under the Old until 12:01 A. M. Sunday,  
then No. 1 is not due to leave C until 12:20 A. M., at which  
time it could proceed, clearing all superior schedules of the  
New.

Q. What would be the result if No. 1 of Saturday of Old  
left C at 11:50 P. M. and unable to make D by 12:01 A. M.  
Sunday?

A. It would be between C and D when New time-  
table takes effect; 19 minutes before due out of C (the station  
behind it), on the New.

Q. If an opposing inferior train at D, is unable to make  
C for No. 1 under the Old, could it move against No. 1 under  
the New leaving D at 12:01 A. M. Sunday, provided it can  
clear the New time of No. 1 at C (12:20 A. M.), as required  
by rule?

A. Yes.

**CORRESPONDING SCHEDULES OF THE OLD AND  
NEW TIME-TABLES.**

**Train Running Late on the Old at Time of Change.  
Time on the New Earlier.**

**PLATE D 1**

**NEW TIMETABLE EFFECTIVE 12:01 AM SUNDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	1		1
	DAILY		DAILY
A	1000 PM	A	900 PM
B	1040 PM	B	940 PM
C	1120 PM	C	1020 PM
D	1201 AM	D	1100 PM
E	1220 AM	E	1150 PM
F	140 AM	F	1240 AM
G	220 AM	G	120 AM
H	300 AM	H	200 AM

**QUESTIONS AND ANSWERS—PLATE D 1.**

**Q. Do the schedules correspond in the six requirements?**  
**A. Yes.**

**Q. Is there a train authorized under the Old at time of change 12:01 A. M. Sunday?**

**A. Yes; at D, or at A, B or C if not fulfilled before 12:01 A. M.**

**Q. If No. 1's time on the New is earlier than on the Old, as shown, and No. 1 leaves A Saturday under the Old, and is at C at 11:50 P. M., could it proceed, and if so, why?**

**A. Yes; No. 1 becomes an hour later under the New instantly the New takes effect, and an opposing train would not have time to move against them.**

**Q. Would it, then, be proper for No. 1 of Saturday to be between C and D at 12:01 A. M. Sunday, provided it was not on the time of an opposing superior schedule under the New?**

**A. Yes.**

**Q. Would No. 1 be permitted to make up time under the New if no order to prevent its doing so?**

**A. Yes.**

**Q. Could No. 1 of Saturday pass D on time at 12:01 A. M. Sunday, and if so, why?**

**A. Just the minute No. 1 is due at D on the Old the New takes effect; it may pass or leave on the new one hour and one minute late—the difference between the times of No. 1 at D on the Old and on the New.**

**Q. If an opposing inferior train is at F at 11:40 P. M. Saturday on the Old, how much time would it have to make E, and why?**

**A. Twenty-one minutes. At 11:40 P. M. at F it has until 12:20 A. M. to make E as long as the Old time-table is in effect, but as the New takes effect at 12:01 A. M. No. 1's time at E is then 11:50 P. M.; instead of 12:20 A. M., and it only has until 12:01 A. M. to make E.**



**SCHEDULES OF THE OLD AND NEW TIME-TABLES  
CORRESPONDING IN ALL PARTICULARS  
EXCEPT THE NUMBER.**

**PLATE A3**

**NEW TIME TABLE EFFECTIVE 1201 AM SUNDAY**

OLD	
WESTWARD	
	1 <sup>ST</sup> CLASS
	3
	DAILY
A	1000PM
B	1040PM
C	1120PM
D	1201AM
E	1220AM
F	140AM
G	220AM
H	<sup>A</sup> 300AM

NEW	
WESTWARD	
	1 <sup>ST</sup> CLASS
	30
	DAILY
A	<sup>L</sup> 900PM
B	940PM
C	1020PM
D	1100PM
E	1150PM
F	1240AM
G	120AM
H	<sup>A</sup> 200AM

**QUESTIONS AND ANSWERS—PLATE A3.**

**Q. Do the schedules correspond in the six requirements?**

**A. No.**

**Q. In what do they fail to agree?**

**A. Number.**

**Q. As there is not a schedule of No. 3 of Saturday on the New that corresponds in the six requirements with No. 3 of Saturday of the Old at time of change, 12:01 A. M. Sunday, what becomes of the schedule of No. 3 of the Old?**

**A. It expires with the Old time-table at 12:01 A. M. Sunday.**

**Q. How may a train running as No. 3 of Saturday of the Old proceed after the New takes effect?**

**A. By train order.**

**Q. As there is not a No. 30 of Saturday on the Old corresponding in the six requirements with No. 30 of Saturday of the New, when is No. 30 of the New first authorized to run?**

**A. At 9:00 P. M. Sunday. which is its first leaving time at its initial station after the New takes effect at 12:01 A. M. Sunday.**

**NEW SCHEDULE OF NEW TIME-TABLE DUE  
TO LEAVE INITIAL STATION AFTER THE  
NEW TAKES EFFECT AND ON THE  
SAME DAY.**

**PLATE A5**

**NEW TIME TABLE EFFECTIVE 1201 AM SUNDAY**

OLD		NEW	
WESTWARD		WESTWARD	
			1 <sup>ST</sup> CLASS
			5
			DAILY
A		A	1000 PM
B		B	1100 PM
C		C	1215 AM
D		D	130 AM
E		E	235 AM
F		F	345 AM
G		G	450 AM
H		H	<sup>A</sup> 600 AM

**QUESTIONS AND ANSWERS—PLATE A5.**

Q. As there is no No. 5 on the Old, when does No. 5 of the New first exist or is first authorized to run?

A. At 10:00 P. M. Sunday at its initial station, which is its first leaving time following the time of change.

Q. As there is no schedule on the Old could No. 5 of the New become authorized at any intermediate station at the first leaving time after the New takes effect? For example, at C at 12:15 A. M. Sunday?

A. —No.

Q. If the New took effect at 10:00 P. M. Sunday instead of 12:01 A. M. Sunday, when is No. 5 of the New first authorized to run?

A. At 10:00 P. M. Sunday, the exact minute the New takes effect.

Q. If the New took effect at 10:01 P. M. Sunday instead of 12:01 A. M. Sunday, when is No. 5 of the New first authorized to run?

A. At 10:00 P. M. Monday, 23 hours and 59 minutes after the New takes effect.

**SCHEDULES OF OLD AND NEW TIME-TABLES  
CORRESPONDING EXCEPT IN DAY OF LEAVING.**

**New First Due to Leave on the Day of Change, Thirty  
Minutes After Change.**

**PLATE A 7**

**NEW TIME TABLE EFFECTIVE 130 AM SUNDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1ST CLASS		1ST CLASS
	7		7
	DAILY		DAILY
A	<sup>L</sup> 1000PM	A	<sup>L</sup> 200AM
B	1100PM	B	300AM
C	1215AM	C	415AM
D	130AM	D	530AM
E	235AM	E	635AM
F	345AM	F	745AM
G	450AM	G	850AM
H	<sup>A</sup> 600AM	H	<sup>A</sup> 1000AM

MEET 7  
AT B

AT F AT  
130 AM

OPPOSING  
INFERIOR  
TRAIN

**QUESTIONS AND ANSWERS—PLATE A 7.**

**Q. Does the last schedule of the Old (Saturday) and the first of the New (Sunday) correspond in the six requirements?**

**A. No.**

**Q. In what particular are they not alike?**

**A. Not the same day of leaving.**

**Q. As New time-table takes effect at 1:30 A. M., Sunday, what is the date of the last No. 7 leaving A on the Old?**

**A. No. 7 of Saturday.**

**Q. What is the date of the first No. 7 that can exist on the New?**

**A. No. 7 of Sunday (2:00 A. M.).**

**Q. Could No. 7 of Saturday, the last under the Old, assume schedule of No. 7 of Sunday, the first under the New?**

**A. No.**

**Q. What becomes of No. 7 of Saturday of the Old at the time of change (1:30 A. M. Sunday)?**

**A. No. 7 of Saturday ceases to exist when the New takes effect.**

**Q. If an extra, or other inferior train, moving in the opposite direction to No. 7, Saturday night, receives an order to meet No. 7 at B, and it is at F at 1:30 A. M. Sunday, when the New takes effect, could the meet be used to go to B for No. 7 under the New? If not, why?**

**A. No; No. 7 of the New is No. 7 of Sunday, and the order was to meet No. 7 of Saturday of the Old.**

**Q. When an order is received to meet a regular train, to what regular train does it refer?**

**A. To the regular train of the number specified in the order that is then due on the division or subdivision, and if none due then to the first of that number that will be due.**

**Q. After 6:00 P. M. Saturday, when No. 7 of Friday becomes 12 hours late at H, an order received any time before 1:30 A. M. Sunday would refer to what train?**

**A. To No. 7 of Saturday.**

**Q. After 1:30 A. M. Sunday, how must inferior train be governed regarding No. 7 of the New?**

**A. Clear No. 7 of the New as required by rule.**

**SCHEDULES OF OLD AND NEW TIME-TABLES  
CORRESPONDING EXCEPT DAY OF LEAVING.**

**New First Due to Leave on Day Following Twenty-  
Three Hours and Thirty Minutes After Change.**

**PLATE B 7**

**NEW TIME TABLE EFFECTIVE 230 AM SUNDAY**

OLD	
WESTWARD	
	1 <sup>ST</sup> CLASS
	7
	DAILY
A	<sup>L</sup> 1000PM
B	1100PM
C	1215AM
D	130AM
E	235AM
F	345AM
G	450AM
H	<sup>A</sup> 600AM

NEW	
WESTWARD	
	1 <sup>ST</sup> CLASS
	7
	DAILY
A	<sup>L</sup> 200AM
B	300AM
C	415AM
D	530AM
E	635AM
F	745AM
G	850AM
H	<sup>A</sup> 1000AM

**QUESTIONS AND ANSWERS—PLATE B 7.**

**Q. Do the schedules correspond in the six requirements?**

**A. No.**

**Q. In what particular are they not alike?**

**A. Day of leaving.**

**Q. What is the last No. 7 that can leave A under the Old?**

**A. No. 7 of Saturday.**

**Q. What is the first No. 7 of the New, and why?**

**A. No. 7 of Monday. As the New time-table takes effect at 2:30 A. M. Sunday, and there is No. No. 7 of Sunday on the Old to assume Sunday's schedule of the New, No. 7 of the New becomes a new schedule, therefore it does not exist at its initial station A until its first leaving time, 2:00 A. M. Monday.**

**Q. If an opposing inferior train leaves H Saturday after 6:00 P. M. with an order to meet No. 7 at B, and it is at F at 2:30 A. M. Sunday, how must it be governed with respect to No. 7?**

**A. As the meet with No. 7 applies to No. 7 of Saturday of the Old and there is no No. 7 of Saturday of the Old or New after the New takes effect, would not consider No. 7 until No. 7 of Monday is due, then clear its schedule time.**



**SCHEDULES OF OLD AND NEW TIME-TABLES  
CORRESPONDING EXCEPT IN CLASS, INITIAL  
AND TERMINAL STATIONS.**

**PLATE A 9**

**NEW TIME TABLE EFFECTIVE 140 AM SUNDAY**

OLD	
WESTWARD	
	1 <sup>ST</sup> CLASS
	9
	DAILY
A	
B	<sup>L</sup> 110AM
C	120AM
D	130AM
E	145AM
F	210AM
G	240AM
H	<sup>A</sup> 310AM

NEW	
WESTWARD	
	2 <sup>D</sup> CLASS
	9
	DAILY
A	<sup>L</sup> 110AM
B	130AM
C	140AM
D	150AM
E	205AM
F	230AM
G	<sup>A</sup> 300AM
H	

**QUESTIONS AND ANSWERS—PLATE A 9.**

- Q. Do the schedules correspond in the six requirements?  
A. No.
- Q. In what do they fail to be alike?  
A. In class, initial and terminal stations.
- Q. If they failed in one requirement would it be equivalent to failing in all?  
A. Yes.
- Q. What becomes of No. 9 of the Old at time of change (1:40 A. M. Sunday)?  
A. Ceases to exist.
- Q. When does No. 9 of the New exist out of A for the first time?  
A. At 1:10 A. M. Monday, 23 hours and 30 minutes after New time-table takes effect.

**SCHEDULES OF OLD AND NEW TIME-TABLES  
CORRESPONDING AS PER RULE.**

**PLATE A 11**

**NEW TIME TABLE EFFECTIVE 12 NOON TODAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	11		11
	DAILY		DAILY
A	810AM	A	200PM
B	830AM	B	220PM
C	855AM	C	245PM
D	920AM	D	310PM
E	940AM	E	330PM
F	1000AM	F	350PM
G	1020AM	G	410PM
H	1030AM	H	420PM

Note: What is meant by "to-day" (the day the time-table takes effect) is the day the schedules are being considered.

**QUESTIONS AND ANSWERS—PLATE A 11.**

**Q. Do the schedules correspond in the six requirements?**

**A. Yes.**

**Q. Is there a train authorized on the Old at 12:00 Noon, the time of change?**

**A. Yes, provided No. 11 of the Old has not been fulfilled over entire run before 12:00 Noon.**

**Q. If No. 11 of Old is at any intermediate station at 12:00 Noon, is there a train authorized when the New takes effect? If so, why?**

**A. Yes. If No. 11 is at an intermediate station at 12:00 Noon, No. 11's schedule is only fulfilled up to such station at time of change, the remaining portion being past due, unfulfilled and not 12 hours late at 12:00 Noon authorizes a train.**

**Q. If called to leave A on No. 11 to-day at 2:00 P. M. under the New, what should you first ascertain?**

**A. Whether No. 11 left A under the Old.**

**Q. If No. 11 had left A before 12:00 Noon under the Old, may we run another No. 11 out of A at 2:00 P. M. under the New? If not, why?**

**A. No, as we cannot have more than one schedule of the same number and day in effect.**

**Q. If No. 11 receives an order to run 2 hours late A to H, what time could it leave A and arrive at F?**

**A. Could not leave A before 10:10 A. M., or leave any intermediate station less than 2 hours late and arrive at F as soon after the leaving time at E as the run can be made under the rules.**

**Q. What is the earliest No. 11 could leave F, and why?**

**A. 5:50 P. M., as the 2-hour run late applies to No. 11's schedule of the New after 12:00 Noon, the same as it applied to the Old before 12:00 Noon, it being the same schedule.**

**Q. If No. 11 receives an order to run 2 hours late A to F, what time could No. 11 leave F under the New?**

**A. On time.**

**Q. If No. 11 of to-day is annulled A to H, could No. 11 run on the New after 12:00 Noon? If not, why?**

**A. As No. 11 of the Old and New correspond in the six requirements they are one and the same schedule and the annulment applies to No. 11 of to-day as printed on both the Old and New time-tables.**

**Q. If No. 11 is fulfilled under the Old A to H before 12:00 Noon, could there be another No. 11 of same date under the New?**

**A. No.**

**SCHEDULES OF OLD AND NEW TIME-TABLES  
CORRESPONDING.**

Schedule of Old Partly Fulfilled at Time of Change.

**PLATE C 11**

**NEW TIME TABLE EFFECTIVE 12 NOON TODAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	11		11
	DAILY		DAILY
A	810AM	A	200PM
B	830AM	B	220PM
C	855AM	C	245PM
D	920AM	D	310PM
E	940AM	E	330PM
F	1000AM	F	350PM
G	1020AM	G	410PM
H	1030AM	H	420PM

**QUESTIONS AND ANSWERS—PLATE C 11.**

Q. Do the schedules correspond in the six requirements.

A. Yes.

Q. Is there a train authorized on the Old at 12:00 Noon to-day, the time of change?

A. Yes, provided No. 11 of the Old has not been fulfilled over entire run before 12:00 Noon.

Q. If No. 11 makes E under the Old, what effect would it have on No. 11's time of the New between A and E as indicated by shaded portion?

A. No. 11 could not run under the New A to E after 12:00 Noon.

Q. If No. 11 of the Old leaves E before 12:00 Noon, would it nullify more of the time of No. 11 of the New?

A. Yes.

Q. If No. 11 of the Old is delayed at E until 12:00 Noon or later, when and how may it proceed?

A. May leave E on the New at 3:30 P. M., or within 12 hours thereafter.

Q. If No. 11 is delayed at E until 12:00 Noon, of what value is the remaining portion of No. 11 of the Old between E and H as indicated by shaded portion?

A. No value.

Q. If there were several sections of No. 11 at E at 12:00 Noon the time of change, how should they be governed?

A. All sections of No. 11 could proceed from E at 3:30 P. M., as permitted by the rules, or within 12 hours thereafter.

# **SCHEDULES OF THE OLD AND NEW TIME-TABLES CORRESPONDING.**

Three Sections on the Old at Different Stations at Time  
of Change.

## **PLATE D41**

### **NEW TIME TABLE EFFECTIVE 12 NOON TODAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	11		11
	DAILY		DAILY
A	810AM	A	200PM
B	830AM	B	220PM
C	855AM	C	245PM
D	920AM	D	310PM
E	940AM	E	330PM
F	1000AM	F	350PM
G	1020AM	G	410PM
H	1030AM	H	420PM

## **QUESTIONS AND ANSWERS—PLATE D 11.**

Q. Do the schedules correspond in the six requirements?

A. Yes.

Q. Is there an authorized No. 11 on the Old at 12:00 Noon to-day, the time of change?

A. Yes, provided No. 11 of the Old has not been fulfilled over entire run before 12:00 Noon.

Q. If there are three sections of No. 11 out of A under the Old, the first section at E, second at D and third at C at 12:00 Noon, the time of change, how should they be governed?

A. Third No. 11 could leave C at 2:45 P. M., second leave D at 3:10 P. M., and first leave E at 3:30 P. M. running far enough apart to comply with the rules relative to spacing trains.

Q. If third No. 11, or last section, is at C at 12:00 Noon, how much of the schedule of No. 11 of the New, of to-day, cannot be used?

A. That portion from A to and including the arriving time at C.



**SCHEDULES OF THE OLD AND NEW TIME-TABLES  
CORRESPONDING.**

Two Sections; the First Completing Run on Old  
Before the Change; the Second Not Out of  
Initial Station at Time of Change.

**PLATE E 11**

**NEW TIME TABLE EFFECTIVE 12 NOON TODAY.**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	11		11
	DAILY		DAILY
1 <sup>ST</sup> ↓	A 810AM		A 200PM
	B 830AM		B 220PM
	C 855AM		C 245PM
	D 920AM		D 310PM
	E 940AM		E 330PM
	F 1000AM		F 350PM
	G 1020AM		G 410PM
	H <sup>A</sup> 1030AM		H <sup>A</sup> 420PM
	1 <sup>ST</sup>		2 <sup>D</sup> ↓

**QUESTIONS AND ANSWERS—PLATE E 11.**

Q. Do the schedules correspond in the six requirements?

A. Yes.

Q. Is there a train authorized on the Old at 12:00 Noon to-day, the time of change?

A. Yes, provided No. 11 of the Old has not been fulfilled over entire run before 12:00 noon.

Q. If two sections of No. 11, and the first section reaches H under the Old before 12:00 Noon, may a first section run on the New after 12:00 Noon?

A. No.

Q. If there are sections when is a schedule fulfilled?

A. Not until it is fulfilled by the last section.

Q. If the second or last section does not leave A before 12:00 Noon, when and how may it leave under the New?

A. As the second section on the New at 2:00 P. M., complying with the time of No. 11 of the New.

Q. Why may the second section leave on the New at 2:00 P. M.?

A. As the second and last section did not run under the Old, No. 11's schedule of the Old was not fulfilled, and that portion of it which was not fulfilled before 12:00 Noon applies under the New.

Q. If second No. 11 does not leave A before 12:00 Noon, could a third or more sections be authorized to follow second No. 11 from A after 2:00 P. M.?

A. Yes.

Q. If on an opposing inferior train at H and ready to leave at 11:00 A. M., and in checking the register it finds only the first section of No. 11 has arrived and it is unable to get orders against the second section, how long would it remain at H for the second or last section?

A. Until 12:00 Noon and then proceed, clearing second No. 11 under the New. If second or last section of No. 11 does not arrive at H before 12:00 Noon it must then respect the schedule of No. 11 as shown on the New.

# **SCHEDULES OF THE OLD AND NEW TIME-TABLES CORRESPONDING.**

Two Sections; the First Completing Run on Old  
Before the Change; the Second at an Intermediate  
Station at Time of Change.

## **PLATE F 11**

### **NEW TIME TABLE EFFECTIVE 12 NOON TODAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	11		11
	DAILY		DAILY
1 <sup>ST</sup> 2 <sup>D</sup>	A 810AM	A 200PM	2 <sup>D</sup>
	B 830AM	B 220PM	
	C 855AM	C 245PM	
	D 920AM	D 310PM	
	E 940AM	E 330PM	
	F 1000AM	F 350PM	
	G 1020AM	G 410PM	
	H 1030AM	H 420PM	
	1 <sup>ST</sup> 2 <sup>D</sup>		2 <sup>D</sup>

## **QUESTIONS AND ANSWERS—PLATE F 11.**

Q. Do the schedules correspond in the six requirements?

A. Yes.

Q. Is there a train authorized on the Old at 12:00 Noon to-day, the time of change?

A. Yes, provided No. 11 of the Old has not been fulfilled over entire run before 12:00 Noon.

Q. If two sections of No. 11, first reaches H before 12:00 Noon to-day and second is at E at 12:00 Noon, how must the second be governed?

A. Wait at E until 3:30 P. M. and run as the second on the New, E to H.

Q. If the second (last section) is at E at 12:00 Noon what effect would it have on the schedule of No. 11 of the New, A to E?

A. It fulfills it as far as E.

Q. If an opposing inferior train is at H at 12:00 Noon, and only the first section of No. 11 has arrived, and it leaves H against second No. 11 under the New and makes E by 1:30 P. M. and finds second No. 11 at E with no signals, how should it be governed, and why?

A. Proceed; as the second section of No. 11 at E at 1:30 P. M. indicates it reached E under the Old, and as it has no signals it fulfilled No. 11's schedule, A to E.

Q. If the opposing inferior train leaves H at 12:00 Noon, before arrival of second No. 11, and meets second No. 11 with no signals on the road waiting for time and did not discover it, in what position would this place the inferior train if it could not make A before 2:00 P. M.?

A. It would clear the time of No. 11 of the New and wait for second No. 11, a train it had previously met.

Q. If opposing inferior train meets Second No. 11 on the road with green signals waiting for time, how should it be governed?

A. Clear time of No. 11 of the New and wait for last section.

**SCHEDULES OF OLD AND NEW TIME-TABLES  
CORRESPONDING EVERY DAY OF THE  
WEEK EXCEPT SUNDAY.**

**Train of Saturday at Intermediate Station at the Time  
of Change Sunday Morning.**

**PLATE A13**

**NEW TIME TABLE EFFECTIVE 1201 AM SUNDAY**

	OLD			NEW		
	WESTWARD			WESTWARD		
		2 <sup>ND</sup> CLASS			2 <sup>ND</sup> CLASS	
		13			13	
		DAILY			DAILY EXCEPT SUNDAY	
SATURDAYS 13	A	1000AM		A	1100AM	SATURDAYS 13 ON NEW LEAVE 1215 AM
	B	1205 PM		B	100PM	
	C	200 PM		C	300PM	
	D	400PM		D	500PM	
	E	500PM		E	600PM	
	F	600PM		F	700PM	
	G	630PM		G	730PM	
	H	700PM		H	800PM	
ARRIVE 12.01 AM						12 HOURS LATE AT 800 AM SUNDAY

**QUESTIONS AND ANSWERS—PLATE A 13.**

Q. Do the schedules correspond in the six requirements on Sunday?

A. No.

Q. Do they correspond in the six requirements any day in the week?

A. Yes, every day in the week except Sunday.

Q. What is the date of No. 13 leaving A at 10:00 A. M. Saturday?

A. No. 13 of Saturday.

Q. If on No. 13 of Saturday and at D by 12:01 A. M. Sunday, how late is No. 13 of Saturday under the Old at 12:01 A. M. Sunday?

A. Eight hours and one minute late.

Q. If No. 13 of the Old is 8 hours and 1 minute late at D at the time New takes effect, not having been fulfilled beyond that point, is there an authorized No. 13 of Saturday at D at the time of change?

A. Yes.

Q. If there is a No. 13 of Saturday at D at 12:01 A. M. Sunday, and ready to leave at 12:15 A. M., how may it proceed?

A. Proceed from D as No. 13 of Saturday of the New time-table, 7 hours and 15 minutes late.

Q. Why may we consider No. 13 of Saturday of the New?

A. For the reason that there is a schedule in effect or authorized No. 13 of Saturday of the Old at D at time of change and No. 13's schedule of Saturday on the New not 12 hours late at D at 12:01 A. M. Sunday. If there is a train authorized on the Old at time of change, it matters not whether the corresponding number on the New, alike in the six requirements, is due or past due to leave, so long as it is not 12 hours late on the New at time of change.

Q. What time has No. 13 of Saturday on the New to make H within the 12-hour limit?

A. Has until 8:00 A. M. Sunday.

Q. If No. 13 of Saturday had not left A before 12:01 A. M. Sunday, could No. 13 of Saturday leave A under the New at or after 12:01 A. M. Sunday? If not, why?

A. No; because No. 13 of Saturday of the Old had been in effect at A, becoming 12 hours late before the New took effect, and there could not be two 13's of Saturday in effect at A.

Q. If No. 13 of Saturday had not been fulfilled out of B before 12:01 A. M. Sunday, could a No. 13 of Saturday run out of B on the New at 12:01 A. M. Sunday?

A. Yes, as No. 13's schedule of Saturday of the Old is only 11 hours and 56 minutes late at B at 12:01 A. M. Sunday, the time of change, therefore we have a train authorized at 12:01 A. M., and No. 13 of Saturday of the New, 11 hours and 1 minute late, at 12:01 A. M., could leave B any time before 1:00 A. M. Sunday.

Q. If on an opposing inferior train ready to leave H any time before 8:00 A. M. Sunday, and No. 13 of Saturday not registered could the inferior train proceed against No. 13 without orders?

A. No, as No. 13 of Saturday has until 8:00 A. M. Sunday to reach H.

**SCHEDULES OF OLD AND NEW TIME-TABLES  
CORRESPONDING EVERY DAY OF THE  
WEEK EXCEPT SATURDAY.**

**Train of Saturday at Intermediate Station at Time of  
Change, Sunday Morning.**

**PLATE B 13**

**NEW TIME TABLE EFFECTIVE 1201 AM SUNDAY**

<div>SATURDAYS 13</div> <div>↓</div> <div>AT D AT 1201 AM SUNDAY</div>	OLD		NEW	
	WESTWARD		WESTWARD	
		2 <sup>ND</sup> CLASS		2 <sup>ND</sup> CLASS
		13		13
		DAILY		DAILY EXCEPT SATURDAY
	A	1000AM	A	1100AM
	B	1205PM	B	100PM
	C	200PM	C	300PM
	D	400PM	D	500PM
	E	500PM	E	600PM
F	600PM	F	700PM	
G	630PM	G	730PM	
H	700PM	H	800PM	

NO SATURDAY  
→ SCHEDULE  
TO ASSUME  
ON NEW

**QUESTIONS AND ANSWERS—PLATE B 13.**

**Q. What days of the week do these schedules correspond in the six requirements?**

**A. Every day except Saturday.**

**Q. If No. 13 of Saturday of the Old is at D at 12:01 A. M. Sunday, how may it proceed and why?**

**A. Proceed only under train order, as there is no No. 13 of Saturday on the New to assume.**

**Q. Could No. 13 wait at D until 5:00 P. M. Sunday and proceed?**

**A. No; a train of one date cannot assume a schedule of another date, even though they are the same number.**



# **SCHEDULES OF OLD AND NEW TIME-TABLES CORRESPONDING.**

Schedule of Old Twelve Hours Late Over Entire Run  
Before New Takes Effect. Time of New at  
Initial Station Later Than Time  
of Change.

## **PLATE A15**

### **NEW TIME TABLE EFFECTIVE 700 PM WEDNESDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1ST CLASS		1ST CLASS
	15		15
	DAILY		DAILY
A	200AM	A	800PM
B	230AM	B	830PM
C	300AM	C	900PM
D	330AM	D	930PM
E	400AM	E	1000PM
F	430AM	F	1030PM
G	500AM	G	1100PM
H	530AM	H	1130PM

No. 15 of Wednesday not fulfilled on the Old.

## **QUESTIONS AND ANSWERS—PLATE A 15.**

Q. Do the schedules correspond in the six requirements?

A. Yes.

Q. If No. 15's schedule is fulfilled on the Old, Wednesday, could No. 15 run on the New, leaving A at 8:00 P. M. Wednesday?

A. No. If there has been one No. 15 in effect Wednesday, there could not be another.

Q. If No. 15's schedule of the Old was not fulfilled Wednesday, could No. 15 run on the New, leaving A at 8:00 P. M. Wednesday?

A. No; No. 15 of Wednesday having been in effect under the Old; even though no train ran on the schedule, it became 12 hours late over entire run, A to H, 1 hour and 30 minutes before the New took effect. Having had one No. 15 of Wednesday in effect, cannot have another.

Q. Then it is not necessary to run a train on a schedule to have it in effect?

A. No.

Q. When does No. 15 of the New first exist out of A?

A. 8:00 P. M. Thursday.

Q. If an opposing inferior train is ready to leave H at 11:30 P. M. Wednesday, 4 hours and 30 minutes after the New takes effect, and No. 15 of Wednesday does not appear on the register at H, could it leave H at 11:30 P. M.?

A. Yes; at 5:30 P. M. Wednesday No. 15's schedule of Wednesday had been in effect over entire run.

# **SCHEDULES OF THE OLD AND NEW TIME-TABLES CORRESPONDING.**

Schedule of Old Unfulfilled at Time of Change and  
Eleven Hours and Fifty-Five Minutes Late  
at an Intermediate Station.

## **PLATE B 15**

**NEW TIME TABLE EFFECTIVE 700 PM WEDNESDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	15		15
	DAILY		DAILY
A	500AM	A	800PM
B	530AM	B	830PM
C	600AM	C	900PM
D	630AM	D	930PM
E	705AM	E	1000PM
F	730AM	F	1100PM
G	800AM	G	1115PM
H	830AM	H	1130PM

15 AT  
E AT  
7 PM

15 LEAVE  
E AT  
10 PM

## **QUESTIONS AND ANSWERS—PLATE B 15.**

Q. Do the schedules correspond in the six requirements?  
A. Yes.

Q. If an opposing inferior train is ready to leave H at 11:30 P. M. Wednesday, and No. 15 of Wednesday does not appear on the register, should it leave H at 11:30 P. M. against the figures as shown on the New at H? If not, why?

A. No, as No. 15 of Wednesday of the Old had not been in effect or fulfilled over entire run prior to time New took effect at 7:00 P. M., the schedule of No. 15 of the New from E to H is in effect. No. 15's schedule of the Old being but 11 hours and 55 minutes late at E at time of change authorizes a train E to H.

Q. Would it be possible to start a No. 15 on the New Wednesday from A, B, C or D? If not, why?

A. No; No. 15 had been in effect at A, B, C and D, having become 12 hours late under the Old before the New took effect at 7:00 P. M. Wednesday.

Q. When does No. 15 of Wednesday lose both right and schedule under the New between E and H?

A. When No. 15 of Wednesday is 12 hours late on the New Thursday morning (11:30 A. M.).

# **SCHEDULES OF THE OLD AND NEW TIME-TABLES CORRESPONDING.**

Schedule Existing (or Train Authorized) on Old Thirty  
Minutes Before New Takes Effect.

## **PLATE A 17**

**NEW TIME TABLE EFFECTIVE 1130 AM SUNDAY**

OLD	
WESTWARD	
	1 <sup>ST</sup> CLASS
	17
	DAILY
A	<sup>L</sup> 1100AM
B	1201PM
C	100PM
D	200PM
E	300PM
F	400PM
G	500PM
H	<sup>A</sup> 600PM

NEW	
WESTWARD	
	1 <sup>ST</sup> CLASS
	17
	DAILY
A	<sup>L</sup> 800AM
B	900AM
C	1000AM
D	1100AM
E	1201PM
F	100PM
G	200PM
H	<sup>A</sup> 300PM

REMARKS ON THE OLD AND NEW TIME-TABLES  
CORRESPONDING  
Schedule Existing (or Train Authorized) on Old Thirty  
Minutes Before New Takes Effect.

## **PLATE B 17**

**NEW TIME TABLE EFFECTIVE 1130 AM SUNDAY**

### **QUESTIONS AND ANSWERS—PLATE A 17.**

Q. Do the schedules correspond in the six requirements?

A. Yes.

Q. Is there a train authorized on the Old at time of  
change—11:30 A. M. Sunday?

A. Yes; if schedule had not been fulfilled out of A on  
the Old before 11:30 A. M., they would have been authorized  
at A for 30 minutes and No. 17 could leave A on the New at  
11:30 A. M., three hours and thirty minutes late, otherwise  
they were authorized between A and B at 11:30 A. M. and No.  
17 of Sunday could continue on their run under the New time-  
table, keeping clear of superior trains.

REMARKS ON THE OLD AND NEW TIME-TABLES  
CORRESPONDING  
Schedule Existing (or Train Authorized) on Old Thirty  
Minutes Before New Takes Effect.

# **SCHEDULES OF THE OLD AND NEW TIME-TABLES CORRESPONDING.**

Schedule of the Old Not in Effect (or Authorized) By  
Two Hours at Time New Takes Effect. Daily  
Schedules But No Schedule Existing  
on Day of Change.

## **PLATE B17**

**NEW TIME TABLE EFFECTIVE 900 AM SUNDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	17		17
	DAILY		DAILY
A	1100AM	A	800AM
B	1201PM	B	900AM
C	100PM	C	1000AM
D	200PM	D	1100AM
E	300PM	E	1201PM
F	400PM	F	100PM
G	500PM	G	200PM
H	600PM	H	300PM

NO AUTHORIZED NO.17 AT TIME OF CHANGE  
LAST NO.17 ON THE OLD, SATURDAY  
FIRST UNDER THE NEW, MONDAY

SCHEDULES OF THE OLD AND NEW TIME-TABLES  
CORRESPONDING.  
Schedule of the Old Not in Effect (or Authorized) By  
Two Hours at Time New Takes Effect. Daily  
Schedules But No Schedule Existing  
on Day of Change.

## **PLATE B17**

**NEW TIME TABLE EFFECTIVE 900 AM SUNDAY**

### **QUESTIONS AND ANSWERS—PLATE B17.**

- Q. Do the schedules correspond in the six requirements?  
A. Yes.
- Q. May we run a No. 17 on Sunday, the day of change?  
If not, why?  
A. No, although alike in the six requirements, there is not a train authorized on the Old at time of change, therefore nothing on the Old to assume the New. No. 17 on the New becomes a new schedule of the New time-table, and does not exist out of A until 8:00 A. M. Monday.
- Q. What was the last No. 17 authorized out of A on the Old?  
A. No. 17 of Saturday.
- Q. If No. 17 was due to leave A under the Old at 9:01 A. M., would a No. 17 be authorized at time of change?  
A. No.

MA0101	D	MA0101	D
MA0101	E	MA0101	E
MA0101	F	MA0101	F
MA0101	G	MA0101	G
MA0101	H	MA0101	H



**SCHEDULES OF THE OLD AND NEW TIME-TABLES  
CORRESPONDING.**

**Schedule Existing (or Train Authorized) on the Old One  
Minute Before the New Takes Effect.**

**PLATE D 17**

**NEW TIME TABLE EFFECTIVE 900 AM SUNDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	17		17
	DAILY		DAILY
A	<sup>L</sup> 859AM	A	<sup>L</sup> 901AM
B	925AM	B	930AM
C	950AM	C	945AM
D	1010AM	D	1015AM
E	1040AM	E	1045AM
F	1110AM	F	1115AM
G	1140AM	G	1145AM
H	<sup>A</sup> 1210PM	H	<sup>A</sup> 1215PM

PLATE D 17  
NEW TIME TABLE EFFECTIVE 900 AM SUNDAY

NEW TIME TABLE EFFECTIVE 900 AM SUNDAY

NEW		OLD	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	17		17
	DAILY		DAILY
A	<sup>L</sup> 901AM	A	<sup>L</sup> 859AM
B	930AM	B	925AM
C	945AM	C	950AM
D	1015AM	D	1010AM
E	1045AM	E	1040AM
F	1115AM	F	1110AM
G	1145AM	G	1140AM
H	<sup>A</sup> 1215PM	H	<sup>A</sup> 1210PM

**QUESTIONS AND ANSWERS—PLATE D 17.**

- Q. Do the schedules correspond in the six requirements?  
A. Yes.
- Q. Is there a train authorized on the Old at 9:00 A. M. Sunday, the time of change? If so, how long has it been authorized?  
A. Yes, one minute.
- Q. Should No. 17 leave A under the Old at 8:59 A. M.?  
A. No. Wait and leave at 9:01 A. M. on the New.
- Q. May No. 17 leave A at 9:01 A. M. Sunday?  
A. Yes.

SCHEDULE OF THE OLD DUE TO LEAVE MONDAY,  
WEDNESDAY AND FRIDAY; ON THE NEW,  
TUESDAY, THURSDAY AND SATURDAY.  
New in Effect 12:01 A. M. Sunday.

## PLATE A 19

NEW TIME TABLE EFFECTIVE 1201 AMSUNDAY

OLD	
WESTWARD	
	1 <sup>ST</sup> CLASS
	19
	MON. WED. FRI.
A	800AM
B	855AM
C	1000AM
D	1100AM
E	1201 PM
F	100PM
G	200PM
H	<sup>A</sup> 230PM

NEW	
WESTWARD	
	1 <sup>ST</sup> CLASS
	19
	TUES. THURS. SAT.
A	800AM
B	905AM
C	1020AM
D	1120AM
E	1220PM
F	120PM
G	220PM
H	<sup>A</sup> 330PM

SCHEDULE OF THE OLD DUE TO LEAVE MONDAY,  
WEDNESDAY AND FRIDAY; ON THE NEW,  
TUESDAY, THURSDAY AND SATURDAY.  
New in Effect 12:01 A. M. Sunday.

## PLATE A 19

NEW TIME TABLE EFFECTIVE 1201 AMSUNDAY

### QUESTIONS AND ANSWERS—PLATE A 19.

Q. Do the schedules correspond in the six requirements?

A. No.

Q. In what do they fail to correspond?

A. Day of leaving. Every day they exist on the Old they do not exist on the New. Every day they exist on the New they do not exist on the Old.

Q. What is the last No. 19 that exists on the Old and the first on the New?

A. 8:00 A. M. Friday on the Old and 8:00 A. M. Tuesday on the New.

**SCHEDULE OF THE OLD DUE TO LEAVE MONDAY,  
WEDNESDAY AND FRIDAY; ON THE NEW,  
TUESDAY, THURSDAY AND SATURDAY.**

New in Effect at 12:01 A. M. Saturday.

**PLATE B 19**

**NEW TIME TABLE EFFECTIVE 1201 AM SATURDAY**

OLD	
WESTWARD	
	1 <sup>ST</sup> CLASS
	19
	MON. WED. FRI.
A	800AM
B	855AM
C	1000AM
D	1100AM
E	1201 PM
F	100PM
G	200PM
H	230PM

NEW	
WESTWARD	
	1 <sup>ST</sup> CLASS
	19
	TUES. THURS. SAT.
A	800AM
B	905AM
C	1020AM
D	1120AM
E	1220PM
F	120PM
G	220PM
H	330PM

**QUESTIONS AND ANSWERS—PLATE B 19.**

Q. Do the schedules correspond in the six requirements?  
A. No.

Q. In what do they fail to correspond?  
A. Day of leaving.

Q. When does the last No. 19 exist out of A on the Old and the first on the New?

A. 8:00 A. M. Friday, on the Old and 8:00 A. M., Saturday, on the New.

Q. If the New took effect at 12:01 A. M., Friday, instead of Saturday, when would the last No. 19 exist out of A on the Old and the first on the New?

A. 8:00 A. M. Wednesday on the Old and 8:00 A. M. Saturday on the New.

**SCHEDULE OF THE OLD DUE TO LEAVE SATURDAY ONLY; ON THE NEW, SUNDAY ONLY.**

## PLATE A 21

**NEW TIME TABLE EFFECTIVE 1201 AM FRIDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	21		21
	SATURDAY ONLY		SUNDAY ONLY
A	800AM	A	820AM
B	855AM	B	905AM
C	1000AM	C	1020AM
D	1100AM	D	1120AM
E	1201PM	E	1220PM
F	100PM	F	120PM
G	200PM	G	220PM
H	<sup>A</sup> 230PM	H	<sup>A</sup> 330PM

**SCHEDULE OF THE OLD DUE TO LEAVE SATURDAY ONLY; ON THE NEW, SUNDAY ONLY.**

## PLATE A 22

**NEW TIME TABLE EFFECTIVE 1000 AM SUNDAY**

NEW		OLD	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	21		21
	SUNDAY ONLY		SUNDAY ONLY
A	800AM	A	820AM
B	855AM	B	905AM
C	1000AM	C	1020AM
D	1100AM	D	1120AM
E	1201PM	E	1220PM
F	100PM	F	120PM
G	200PM	G	220PM
H	<sup>A</sup> 230PM	H	<sup>A</sup> 330PM

### QUESTIONS AND ANSWERS—PLATE A 21.

**Q. Do the schedules correspond in the six requirements?**

**A. No, not the same day of leaving.**

**Q. When does the last No. 21 exist out of A on the Old and the first on the New?**

**A. 8:00 A. M. on the Old the last Saturday preceding Friday, the day of change; 8:20 A. M. on the New the first Sunday following Friday, the day of change.**

CHICAGO  
INDIANAPOLIS  
MART



**SCHEDULE OF THE OLD WITH NO CORRESPONDING  
SCHEDULE ON THE NEW.**

**PLATE A 25**

**NEW TIME TABLE EFFECTIVE 1000 AM SUNDAY**

OLD		NEW	
WESTWARD		WESTWARD	
	1ST CLASS		
	25		
	DAILY		
A	700AM	A	
B	730AM	B	
C	800AM	C	
D	830AM	D	
E	900AM	E	
F	930AM	F	
G	1000AM	G	
H	1030AM	H	

↑  
OPPOSING  
INFERIOR  
TRAIN

NEW TIME TABLE EFFECTIVE 1000 AM SUNDAY

**PLATE A 25**

NEW TIME TABLE EFFECTIVE 1000 AM SUNDAY

NEW		OLD	
WESTWARD		WESTWARD	
	1ST CLASS		
	25		
	DAILY		
A	700AM	A	
B	730AM	B	
C	800AM	C	
D	830AM	D	
E	900AM	E	
F	930AM	F	
G	1000AM	G	
H	1030AM	H	

**QUESTIONS AND ANSWERS—PLATE A 25.**

**Q.** As there is no schedule on the New corresponding as required, what becomes of the schedule of No. 25 of the Old at 10:00 A. M. Sunday?

**A.** The schedule of No. 25 of Sunday does not exist after 10:00 A. M. If a No. 25 is on the road it can only proceed as authorized by train order, after 10:00 A. M.

**Q.** If an opposing train holds a meet with No. 25 of Sunday, how should it be governed after 10:00 A. M.?

**A.** Proceed on its run, as there is no No. 25 on the New to meet.

SCHEDULE OF OLD AND NEW WITH DIFFERENT  
ROUTE (DIRECTION) C TO G.

PLATE A27

NEW TIME TABLE EFFECTIVE 1200 NOON SUNDAY

OLD		NEW	
WESTWARD		WESTWARD	
	1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
	27		27
	DAILY		DAILY
A	1000AM	A	1000AM
B	1040AM	B	1040AM
C	1120AM	C	1120AM
D	1140AM	I	1140AM
E	1200NOON	J	1200NOON
F	1240PM	K	1240PM
G	120PM	G	120PM
H	A 200PM	H	A 200PM

SAME DIVISION OR SUB-DIVISION

QUESTIONS AND ANSWERS—Plate A27.

- Q. Do the schedules correspond in the six requirements?  
A. No, not the same direction (route).  
Q. How long does the schedule of No. 27 of Sunday exist?  
A. Until 12 Noon.  
Q. At 12 Noon has there been a No. 27 in effect under the Old whether a train has used it or not?  
A. Yes.  
Q. Does No. 27 exist under the New on Sunday, the day of change? If not, why?  
A. No, a No. 27 has been in effect under the Old and can not have another of the same date (Sunday).  
Q. What is the first time No. 27 can exist under the New?  
A. 10:00 A. M., Monday.

**SCHEDULE OF OLD AND NEW WITH DIFFERENT  
INITIAL STATION AND ROUTE (DIRECTION).**

**PLATE A 29**

**SAME DIVISION OR SUB-DIVISION -**

**NEW TIME TABLE EFFECTIVE 1000AM SUNDAY**

MAIN LINE A TO H	OLD		NEW	
	WESTWARD		WESTWARD	
		1 <sup>ST</sup> CLASS		1 <sup>ST</sup> CLASS
		29		29
		DAILY		DAILY
	A	810AM	I	1005AM
	B	825AM	J	1015AM
	C	840AM	K	1025AM
	D	855AM	D	1035AM
	E	915AM	E	1055AM
F	935AM	F	1115AM	
G	955AM	G	1135AM	
H	1020AM	H	1150AM	
		MAIN LINE ↑ BRANCH LINE		
		D TO H ↑ ITOD		
		JCT. STATION D		

**QUESTIONS AND ANSWERS—PLATE A 29.**

- Q. Do the schedules correspond in the six requirements?  
A. No, neither the same initial station nor direction (route).  
Q. How long does the schedule of No. 29 of Sunday exist?  
A. Until 10:00 A. M.  
Q. At 10:00 A. M. has there been a No. 29 in effect under the Old, whether a train has used it or not?  
A. Yes.  
Q. What is the first time No. 29 can exist under the New and why?  
A. At I at 10:05 A. M. Monday, as there has been one No. 29 in effect Sunday under the Old.  
Q. If the schedule has not been fulfilled on the Old between D and H prior to 10:00 A. M. Sunday why cannot that portion of the New be used Sunday?  
A. As there has been one in effect Sunday under the Old, the rule does not permit of another of the same number,

**A TIME TABLE WITH TWO SUBDIVISIONS.**  
**A Schedule on New Time-Table with None Corresponding**  
**on the Old, Due to Leave Initial Station on Subdivision**  
**No. 2 Before Due to Leave Initial Station on**  
**Subdivision No. 1.**

**PLATE A 55**

**DIVISION A**

**TIMETABLE EFFECTIVE 1201 AM SUNDAY**

Sub-Div. No.1.	
WESTWARD	
	1ST CLASS
	55
	DAILY
A	1000 PM
B	1050 PM
C	1130 PM
D	1215 AM
E	100 AM
F	145 AM
G	220 AM
H	310 AM

Sub-Div. No.2	
WESTWARD	
	1ST CLASS
	55
	DAILY
H	315 AM
I	400 AM
J	445 AM
K	530 AM
L	620 AM
M	700 AM
N	730 AM
O	800 AM

**NO NUMBER 55 ON THE OLD**

**QUESTIONS AND ANSWERS—PLATE A 55.**

- Q. On this time-table how many subdivisions are there?  
A. Two.
- Q. Is it understood that there is no No. 55 on the Old corresponding in the six requirements?  
A. Yes.
- Q. Time-table effective 12:01 A. M. Sunday; when does No. 55 exist at A for the first time?  
A. 10:00 P. M. Sunday, the day of change.
- Q. When is No. 55 first due to leave H on subdivision No. 2?  
A. At 3:15 A. M. Sunday, the day of change.
- Q. Why does No. 55 exist out of H at 3:15 A. M. Sunday, 18 hours and 45 minutes before they exist out of A?  
A. Subdivision No. 2 must be considered a separate railroad from subdivision No. 1, so far as the movement of trains is concerned, and No. 55 may leave its initial station H on subdivision No. 2 at its first leaving time after the New time-table takes effect.
- Q. If there were no subdivisions, or if it was one subdivision from A to O instead of two would it be one schedule A to O and what would be the initial and terminal stations?  
A. Yes, A the initial and O the terminal station.
- Q. In this case when would No. 55 exist out of A for the first time?  
A. 10:00 P. M. Sunday, the day of change.
- Q. When would it exist out of H for the first time?  
A. 3:15 A. M. Monday, five minutes after it is due to arrive as H is then an intermediate station.

**RULES 5 TO 16 INCLUSIVE.**

- Q. When one time is given for a train at a station, is it the arriving or leaving time?  
A. The leaving time unless indicated as the arriving time.
- Q. When two times are given at a station, what are they?  
A. The earlier is the arriving, the later the leaving.
- Q. Where does time apply unless otherwise indicated?  
A. At switch at which an inferior train enters siding.
- Q. Where there is no siding, where does it apply?  
A. The place where fixed signals are operated.
- Q. Where there is neither siding nor fixed signal, where does it apply?  
A. At the place where traffic is received or discharged.
- Q. How are schedule meeting and passing stations indicated?  
A. By full-faced type.
- Q. When both arriving and leaving times are full-faced, what does it indicate?  
A. Both are meeting or passing times, or that one or more trains are to meet or pass between the times.
- Q. When one or more trains are to meet or pass between



two times, or more than one train to meet a train at any station, how is attention called to it?

A. Some Railroads use the dash under the time, others place the numbers of trains to be met or passed in small figures above and to one side of the time.

Q. When trains are to meet or pass at a siding extending between two adjoining stations how should it be indicated?

A. By showing the time at each end of the siding in full-faced type.

Q. When the train to be passed reaches the full-faced passing point between trains of the same class, may it proceed on its own schedule?

A. Yes.

Q. If train that is to pass is on its schedule time, would it be good judgment to do so?

A. No, let it by.

Q. Which train should take the siding?

A. The leading train unless the conditions are such that it would save delay to do otherwise.

Q. How should following train approach the schedule passing point?

A. Under control, prepared to find leading train on the main track.

Q. If train to be passed holds the main track, should it protect itself?

A. Yes.

Q. What does "s" placed opposite the schedule time at a station indicate?

A. Regular stop.

Q. What does "f" placed opposite the schedule time at a station indicate?

A. Stop on signal to receive or discharge passengers or freight.

Q. If there is a conditional flag stop under Special Rules in time-table, or bulletin or other instructions what signal should be used?

A. A red signal.

Q. If a green and white signal is displayed and a train approaches whose schedule is not indicated by letter "f", how should it be governed?

A. The same as if the signal was not displayed.

Q. Must employees whose duties require them to give signals provide themselves with the necessary appliances and keep them in good order ready for use?

A. Yes.

Q. When must day signals be displayed?

A. From sunrise to sunset.

Q. When should night signals be displayed during the day?

A. When from weather or other conditions day signals can not be plainly seen.

Q. When must night signals be displayed?

A. From sunset to sunrise.

Q. If a fusee is found burning on or near the track, how should train be governed?

A. Stop, extinguish the fusee and then proceed cautiously, looking out for a train ahead or track obstruction.

Note: Old Standard Rules require train to wait until fusee has burned out.

Q. State the meaning of various color signals.

A. (See Rule 10).

Q. Give hand, flag and lamp signals and their indications.

A. (See Rule 12).

Q. What does one long and two short sounds of engine whistle indicate?

A. A section of the same schedule following.

Q. To what engines and trains should this signal be given?

A. To yard engines, extra trains, or trains of the same or inferior class or inferior right.

Q. When should a train made inferior by train order give signal one long and two short to a train made superior by the same order?

A. When inferior train under right order (Form C) makes a station within the limits of the order displaying green signals.

Q. If an inferior train under the time-table displaying green signals meets or passes a superior train under train order, should it whistle signals?

A. Yes, unless sections are specified.

Q. If trains of the same class meet or pass on single track, both displaying signals how should they be governed?

A. Both trains should give the signal and receive the answer.

Q. How should the signal one long and two short be answered.

A. By two short sounds.

Q. If train met or passed fails to answer the signal, how should train giving signal be governed?

A. Stop immediately and inform them of the display of green signals, if possible, and report failure to the Dispatcher.

Q. If there is a short section of double track at the end of a run, for example, double track extending just out of a terminal yard and no register maintained at end of double track, should trains after passing from single to double track give the signal one long and two short to opposing trains on opposite track when displaying green signals?

A. Yes.

Q. On double track when one train runs around another, both displaying signals, should both give signal one long and two short?

A. No, only the one passing, A. R. A. Ruling, Oct 17, 1910.

Q. State the meaning of all other engine whistle signals.

A. (See Rule 14).

Q. Is it necessary to answer a proceed signal to leave a station by two short blasts of the steam whistle?

A. No, compliance with the signal answers it.

Q. What is the meaning of the explosion of two torpedoes?

A. Reduce speed and look out for a train ahead or obstruction.

Q. What does the explosion of one torpedo indicate?

A. The same as two, but the use of two is required.

Note: If working under the old rule where explosion of one torpedo means STOP, comply with it.

Q. When running, what does three short sounds of communicating signal mean?

A. Stop at next passenger station.

Q. When running what does one long sound indicate?

A. Look back for hand signals.

Q. State the meaning of all other communicating signals.

A. (See Rule 16).

### TRAIN SIGNALS.

#### Rules 17 to 26 Inclusive.

Q. When should headlight be displayed?

A. From sunset to sunrise and before and after if weather or other conditions make it necessary.

Q. When should the headlight be concealed?

A. When a train turns out to meet another and has stopped clear of main track, or is standing to meet trains at the end of double track or junction.

Q. If standing at end of double track to meet a train, and the normal line up is for the train to head out to single track, would it be good judgment to conceal headlight before switch is lined up for opposing train to enter opposite track?

A. No.

Q. Must engineman assume the rear of his train is clear when he receives a stop signal?

A. No, engineman must positively know that train is clear; if in doubt, leave headlight displayed.

Q. If meeting a train that takes siding and the headlight is displayed, how would you be governed?

A. Stop and ascertain cause, then proceed prepared to stop before reaching point where track may be obstructed.

Q. If inferior train should hold main track to head superior train in on the siding, even though the switch is lined up for siding, should headlight be concealed?

A. No, not until opposing train has stopped or reduced speed, and understands the situation thoroughly, then it may be concealed to avoid a high candle power light obscuring view of opposing train entering siding.

Q. While running on double track should headlight be concealed when passing a train in opposite direction?

A. No. However, if equipped for screening the light it should be screened, especially in yards and near large passenger stations.

Q. Should headlight be displayed in long tunnels and snow sheds?

A. Yes. (If required by local rules).

Q. When an engine is running backward at night what signal should be displayed on rear of tender?

A. A white light.

Q. What signals should yard engines display at night?

A. A headlight to the front and rear and, if no headlight at the rear, display a white light. Yard engines should not display markers.

Q. Should headlight be displayed by helping engines when clear of the main track waiting to help trains?

A. No.

Q. If it is considered not necessary to conceal headlight as required by Rule 17 may the provision be omitted?

A. Yes, if authorized by proper authority.

Q. What signals must be displayed as markers when occupying main track? (Single and double track).

A. By day two green (or yellow) flags or marker lamps (not lighted) one on each side of rear of train. By night green (or yellow) lights to the front and side and red light to rear, one on each side.

Q. What signals must be displayed as markers at night when clear of the main track to meet a train?

A. Green (or yellow) lights to the front, side and rear.

Q. Should markers be displayed in the same manner when in long tunnels and snow sheds?

A. Yes.

Q. When a diverging route parallels a main route at a junction, should markers of train on diverging route display green to rear to avoid delay to a train approaching them on the main route?

A. No, no more than if train was on a foreign line.

Note: If conditions require it, train on diverging route could be authorized to display green next to the main route, leaving outside marker red.

Q. May the display of markers on passenger trains by day be discontinued?

A. Yes, if so authorized by proper authority.

Q. What signals must be displayed by sections?

A. All sections except the last must display two green flags in place provided on the engine by day and, in addition, two green lights by night.

Q. What signals must be displayed by extra trains?

A. Two white flags by day in place provided on engine and, in addition, two white lights at night.

Q. When two or more engines are coupled, (See Rules 20 and 21) how should signals be displayed?

A. All engines coupled on the head end must display the signals.

Q. If a helping engine is coupled in middle or on rear of train, should it duplicate the signals of the train engine?

A. No.

Q. If one flag or light is displayed where in Rules 19, 20 and 21 two are required, will it indicate the same as two?

A. Yes, but the proper display of signals is necessary.

Q. At night when cars are pushed by an engine (except when shifting or making up trains in yards) what light must be displayed, and where?

A. A white light must be displayed on the front of the leading car.

Q. Must each car of a passenger train be connected with engine by a communicating signal appliance?

A. Yes.

Q. What does a blue signal displayed at one or both ends of an engine, car or train indicate?

A. That workmen are under or about the engine, car or train, and it must not be coupled to or moved.

Q. When a blue signal is displayed on an engine, car or train, who is authorized to remove it?

A. The same workmen who placed it there.

Q. If given a signal by workmen to remove the signal or to couple on, should it be done?

A. No, the signal must first be removed by the workmen.

Q. Should other cars be placed on the same track so as to intercept the view of the blue signal without first notifying the workmen?

A. No.

Q. Should workmen ice, water or inspect cars of a train without first protecting at both ends with a blue signal?

A. No.

### USE OF SIGNALS.

#### Rules 27 to 37 Inclusive.

Q. How must a signal imperfectly displayed or the absence of signal at a place where one is usually shown be regarded?

A. As the most restrictive indication that can be given by that signal. The fact must be reported to the proper official.

Q. If a switch light is imperfectly displayed, or absent, how should conductor and engineman be governed?

A. Correct or replace the light if possible, and report to the proper official.

Q. What does a combination green and white signal indicate?

A. The train running on schedule designated by the letter "T" at station where signal is displayed must stop to take on passengers or freight.

Q. How should a train not designated by its schedule to stop on flag be governed if it finds a green and white signal displayed?

A. The same as if it was not there.

Q. If a green and white signal is swung across the track, how should all trains be governed?

A. Stop.

Q. If hand or any object is waved across the track how should train be governed?

A. Stop and ascertain the cause.

Q. Where should the green and white signal be placed at station?

A. On single track it should be placed on the office side unless it can not be plainly seen, then it may be placed on the opposite side of track. On double track it should be placed outside of the track to which it is to apply. On more than two tracks it should be placed to the right of track governed.

Q. If special rules permit a train to be flagged for passengers for certain specified points, and the letter "T" does not appear opposite the time at the station in the schedule, what signal should be used?

A. A red signal. If there is a train order signal it may be used and train given a clearance if one is required. If a red flag or lamp is used where there is a train order signal, which has been properly cleared, operator should explain fully to train and engine men that it is a flag for passengers.

Q. When a signal (except a fixed signal) is given to stop a train, how must it be recognized?

A. By two short sounds of the whistle, unless otherwise provided.

Q. When must the engine bell be rung?

A. When train is about to move, while approaching and passing public crossings at grade, and through tunnels and snow sheds or other obscure places.

Q. Where must the whistle be sounded and is its unnecessary use prohibited?

A. Whistle must be sounded at all places where required by rule or law. The unnecessary use of whistle is prohibited, private whistles conveying personal information or to attract personal attention is prohibited.

Q. What signals are crossing watchmen required to use?

A. Stop signals to stop a train and the signal designated by the rules or by law to stop highway traffic.

Q. Must trains be fully protected against any obstruction which interferes with their safe passage at normal speed?

A. Yes.

Q. When track is in a condition requiring reduced speed, what is necessary?

A. It must be protected by a flagman until such time as proper notice can be given to approaching trains and, in addition, as soon as practicable a caution signal displayed a sufficient distance in each direction.

Q. When caution signals are so placed, how far do they govern?

A. Until a proceed signal (green flag or light) is reached.



Q. If one flag or light is displayed where in Rules 19, 20 and 21 two are required, will it indicate the same as two?

A. Yes, but the proper display of signals is necessary.

Q. At night when cars are pushed by an engine (except when shifting or making up trains in yards) what light must be displayed, and where?

A. A white light must be displayed on the front of the leading car.

Q. Must each car of a passenger train be connected with engine by a communicating signal appliance?

A. Yes.

Q. What does a blue signal displayed at one or both ends of an engine, car or train indicate?

A. That workmen are under or about the engine, car or train, and it must not be coupled to or moved.

Q. When a blue signal is displayed on an engine, car or train, who is authorized to remove it?

A. The same workmen who placed it there.

Q. If given a signal by workmen to remove the signal or to couple on, should it be done?

A. No, the signal must first be removed by the workmen.

Q. Should other cars be placed on the same track so as to intercept the view of the blue signal without first notifying the workmen?

A. No.

Q. Should workmen ice, water or inspect cars of a train without first protecting at both ends with a blue signal?

A. No.

### USE OF SIGNALS. Rules 27 to 37 Inclusive.

Q. How must a signal imperfectly displayed or the absence of signal at a place where one is usually shown be regarded?

A. As the most restrictive indication that can be given by that signal. The fact must be reported to the proper official.

Q. If a switch light is imperfectly displayed, or absent, how should conductor and engineman be governed?

A. Correct or replace the light if possible, and report to the proper official.

Q. What does a combination green and white signal indicate?

A. The train running on schedule designated by the letter "T" at station where signal is displayed must stop to take on passengers or freight.

Q. How should a train not designated by its schedule to stop on flag be governed if it finds a green and white signal displayed?

A. The same as if it was not there.

Q. If a green and white signal is swung across the track, how should all trains be governed?

A. Stop.

Q. If hand or any object is waved across the track how should train be governed?

A. Stop and ascertain the cause.

Q. Where should the green and white signal be placed at station?

A. On single track it should be placed on the office side unless it can not be plainly seen, then it may be placed on the opposite side of track. On double track it should be placed outside of the track to which it is to apply. On more than two tracks it should be placed to the right of track governed.

Q. If special rules permit a train to be flagged for passengers for certain specified points, and the letter "P" does not appear opposite the time at the station in the schedule, what signal should be used?

A. A red signal. If there is a train order signal it may be used and train given a clearance if one is required. If a red flag or lamp is used where there is a train order signal, which has been properly cleared, operator should explain fully to train and engine men that it is a flag for passengers.

Q. When a signal (except a fixed signal) is given to stop a train, how must it be recognized?

A. By two short sounds of the whistle, unless otherwise provided.

Q. When must the engine bell be rung?

A. When train is about to move, while approaching and passing public crossings at grade, and through tunnels and snow sheds or other obscure places.

Q. Where must the whistle be sounded and is its unnecessary use prohibited?

A. Whistle must be sounded at all places where required by rule or law. The unnecessary use of whistle is prohibited, private whistles conveying personal information or to attract personal attention is prohibited.

Q. What signals are crossing watchmen required to use?

A. Stop signals to stop a train and the signal designated by the rules or by law to stop highway traffic.

Q. Must trains be fully protected against any obstruction which interferes with their safe passage at normal speed?

A. Yes.

Q. When track is in a condition requiring reduced speed, what is necessary?

A. It must be protected by a flagman until such time as proper notice can be given to approaching trains and, in addition, as soon as practicable a caution signal displayed a sufficient distance in each direction.

Q. When caution signals are so placed, how far do they govern?

A. Until a proceed signal (green flag or light) is reached.



Q. If two caution signals are passed before a proceed signal is reached, how should trains be governed?

A. Continue at reduced speed until the second proceed signal is passed.

Q. Should track and bridge men avoid lapping their signal protection?

A. Yes. If trackmen are to protect a piece of track and bridgemen a bridge in the same vicinity, they should confer and use the same signals. Signals should not then be removed by one without first conferring with the other.

Q. What whistle signal must enginemen give at least one mile before reaching a schedule meeting point with a train of the same or superior class, or a train order meeting point with any train?

A. Two long and one short sounds.

Q. In approaching a meeting point with a superior train at any station should the signal two long and one short sounds of whistle be given at least one mile before reaching the meeting point?

A. Yes.

Q. On trains equipped with communicating signals if required by local rules what signal must conductor give the engineman at least one mile before reaching meeting point with a superior train, either under time-table or train order?

A. Two long and one short sounds of communicating signal.

Q. Should an engineman fail to give two long and one short sounds of whistle approaching meeting point, what must be done?

A. Stop the train immediately.

Note: On some railroads one sound of air whistle has same meaning as two long and one short, when given by conductor.

Q. What signals must flagmen use?

A. By day, a red flag and torpedoes. By night, a red light, a white light, torpedoes and fuses.

Q. Must enginemen and firemen when practicable, communicate with each other by name the indication of all signals affecting the movement of their trains?

A. Yes.

### SUPERIORITY OF TRAINS.

#### Rules 71 to 73 Inclusive.

Q. How may a train be made superior to another?

A. By right, class or direction.

Q. How is superiority by direction conferred, to what kind of track and between what trains does it apply?

A. Superiority is conferred by the time-table and also by the direction specified therein. It applies to single track only, and between opposing trains of the same class.

Q. In what direction are trains superior by direction as between opposing trains of the same class?

A. (Consult time-table before replying).

Q. How is superiority by class conferred?

A. By time-table. First class is superior to second, second to third, and so on.

Q. How is superiority by right conferred?

A. By train order.

Q. Is right superior to class and direction, and why?

A. Yes, because a train order supersedes a time-table movement insofar as they conflict.

Q. Are extra trains inferior to regular trains?

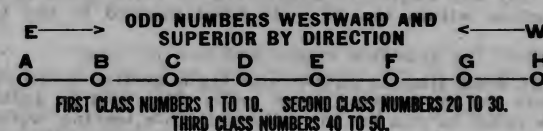
A. Yes.

Q. Are extras required to consider opposing extras unless so notified by train order?

A. No.

Q. Are work extras required to consider extra trains unless notified not to do so, and how?

A. Yes, unless authorized by train order to the contrary work extras must protect in both directions while occupying the main track against any extra train that may run.



Q. Under the above diagram is No. 5 superior to No. 4 and how?

A. Yes, by direction.

Q. Is No. 2 superior to No. 25, and how?

A. Yes, by class.

Q. Is No. 45 superior to No. 20?

A. No, No. 45 is inferior to No. 20 by class.

Q. Are all schedules between Nos. 1 and 10, inclusive, superior to all other schedules and how?

A. Yes, superior by class.

Q. Are all schedules between Nos. 20 and 30, inclusive, superior to all schedules between Nos. 40 and 50, inclusive, and how?

A. Yes, by class.

Q. If No. 20 is given right over No. 7 A to D, would No. 20 be superior to No. 7, and how?

A. Yes, by right A to D.

Q. Would No. 7 be superior to No. 20 from H to D, and how?

A. Yes, by class.

Q. If No. 20 held right over No. 7 A to D, what effect would it have on No. 7's superiority by class as against No. 20?

A. It suspends No. 7's superiority by class until the right order is superseded or annulled.

## MOVEMENT OF TRAINS.

### Rules 82 to 106 Inclusive.

Q. After a schedule is once fulfilled, may it be fulfilled again?

A. No.

Q. How long are time-table schedules in effect unless fulfilled?

A. For 12 hours after their time at each station.

Q. If a schedule has two times at a station, how long is it in effect at that station?

A. It is in effect for train to arrive until 12 hours after its arriving time, and for train to leave until 12 hours after its leaving time. The schedule exists until 12 hours late on the leaving time.

Q. If a train running on the schedule arrives later than the 12 hour limit on the arriving time under flag, may it leave if it can get out within the 12 hour limit on its leaving time?

A. No, not unless authorized by train order.

Q. May any engine be authorized by train order to run on the schedule within the 12 hour limit applied to the leaving time?

A. Yes, the schedule exists and can be used.

Q. If dead time is shown and train arrives more than 12 hours late on its arriving time under flag, and is authorized by train order to run on the same schedule leaving within the limit of the leaving time, are all orders it may have received before, and in effect at the time it became more than 12 hours late on its arriving time, in effect?

A. No, it must be given all orders effecting the schedule when again authorized to use the schedule, except annulments of schedules and track orders which may be used.

Q. If a train arrives exactly 12 hours late on its arriving time, does it lose both right and schedule?

A. No, it must be more than 12 hours late arriving before it loses its right and schedule.

Q. Is a train permitted to leave under the following conditions, until all trains due, which are superior by either right, class or direction, have arrived and left, unless authorized to do so by train order?

Leave initial station on any Division or Sub-division? (Includes extras and work extras).

Leave a junction?

Leave a station where a superior train originates or terminates?

Leave any station where it may have lost record of trains, or pass from double to single track?

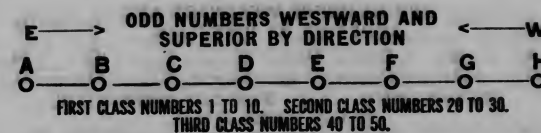
A. No.

Q. How are train registers designated on the time-table?

A. (Consult your Book of Rules).

Q. Where are registers located on your Division or Subdivision?

A. (Name locations).



Q. If there is a rule permitting No. 2 to register by ticket at D (assuming it is a register station) and No. 2 meets No. 1 at C without signals, would it be necessary for No. 2 to check register at D against No. 1?

A. No, if No. 1 took down signals at D the operator at D must stop No. 2 and notify it. The conductor of No. 1 should also notify No. 2 when they meet them.

Q. If there is a rule permitting No. 2 to register by ticket at D and No. 3, an opposing superior schedule terminates at D and is due and not more than 12 hours late at D, would it be necessary for No. 2 to check register at D against No. 3?

A. Yes.

Q. If a superior train of the same direction originates at D and is due or overdue (not exceeding 12 hours) would it also be necessary to check against it?

A. Yes.

Q. If an order is received authorizing No. 2 to register by ticket and stating that regular trains due D before 1:30 P. M. have arrived and left, and No. 2 meets No. 5 at C without signals, should No. 2 check against No. 5 at D if No. 5 is due there at or after 1:30 P. M.?

A. Yes.

Q. May a train start without proper signal being given?

A. No.

Q. Who is authorized to give signal to start?

A. Conductor.

Q. Are brakemen permitted to give the starting signal?

A. No, only when necessary to relay signal to the engineer when he can not see conductor's signal.

Note: Brakeman at rear of train may give conductor signal indicating that all is right.

Q. When a train of one schedule is on the time of another schedule of the same class in the same direction, how may it proceed?

A. Proceed on its own schedule.

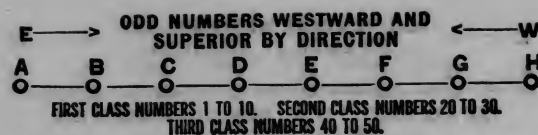
Q. May trains of one schedule pass trains of another schedule of the same class without orders?

A. Yes.

Q. May extra trains pass and run ahead of extra trains without orders?

A. Yes.

Note: Where the Standard Rules require a five minute clearance running ahead of a superior train it should be considered ten in these answers if your local rules require it.



Q. Under above example how much must No. 25, No. 47 or an extra west clear No. 1's schedule at D?

A. Must be into clear and switch lined up for main track by the time No. 1 is due out of E unless No. 1's time from E to D is less than five minutes, then a five minute clearance should be made.

Q. How much must No. 48 or an extra east clear No. 20?

A. Five minutes.

Q. How much must Nos. 25 and 47 or an extra west clear No. 2?

A. Be clear of main track at least five minutes before No. 2 is due to leave.

Q. How much must No. 2 clear No. 1's schedule?

A. Must be into clear before its leaving time.

Q. Must inferior trains keep out of the way of opposing superior trains and, failing to do so, how should they be governed?

A. Yes, and if physically impossible owing to unforeseen conditions train must be protected as prescribed by Rule 99.

Q. How much are extra trains required to clear the time of opposing regular trains?

A. Five minutes.

Q. How must extra trains be governed with respect to opposing extra trains?

A. By train orders.

Q. At meeting points between trains of the same class, how much must the inferior train clear the superior train?

A. Be into clear before the leaving time of the superior train. Note: This does not mean at the leaving time.

Q. May extra trains pass and run ahead of certain regular trains as may be authorized by your rules without orders?

A. Yes.

Q. May extra trains that fall back on the time of regular trains referred to in preceding question proceed ahead of them without orders?

A. Yes.

Q. May a section of one schedule pass and run ahead of a section of the same schedule on either single or double track without orders, provided all orders, signals and numbers are exchanged?

A. Yes.

Q. With whom does the responsibility rest if all orders are not exchanged when one section passes another?

A. Conductors and enginemen making the exchange.

Q. When one section passes another where must report be made?

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A. From the next available point of communication.

Q. Do you understand from preceding question and answer that it must not be done without orders if the sections are at an available point of communication?

A. Yes.

Q. At meeting points between extra trains which train must take the siding unless otherwise provided?

A. The extra moving in the inferior time-table direction. (See Second paragraph, Rule 88).

Q. Does this imply that superiority by direction exists between opposing extras?

A. No.

Q. Are trains permitted to back into sidings?

A. Yes, but should pull in when practicable and, if necessary to back in, must be protected as prescribed by Rule 99 unless otherwise provided.

Q. If meeting a superior train at a spur by train order and it is necessary to run by switch to back in, should the inferior train flag by the switch?

A. It should not be necessary as the conductor and engineman of superior train should be acquainted with the road and should know that it is the only way the inferior train can take the siding. However, if the view is obscure the inferior train should send flagman ahead as an extra precaution.

Q. How far back should the inferior train stop?

A. Far enough to allow the inferior train to pull by to clear assuming inferior train to be of maximum length.

Q. If the superior train observes a train on the spur, or siding, in case the order permitted inferior train to run by and back in, should they assume it is the train they are to meet?

A. No.

Q. If the superior train is instructed to run by and back in for the inferior train, should the same principle apply?

A. Yes.

Q. If the train that is to hold main track is not waiting, how should the train be governed after backing in?

A. Send a flagman out to signal the train by.

Q. At meeting points between trains of different classes which train must take the siding and how much must it clear?

A. The inferior train must take siding and clear the superior train at least five minutes.

Q. Are trains required to stop at schedule meeting points with trains of the same class?

A. Yes, unless the switch is right and track is seen to be clear.

Q. When the expected train of the same class is not found at the schedule meeting point, how should the superior train be governed?

A. Approach all sidings prepared to stop until the expected train is met.

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Q. Where must superior train stop when meeting an inferior train?

A. Clear of the switch to be used by the inferior train.

Q. Unless some form of block signal is used, how far apart must trains run that are carrying passengers?

A. At least ten minutes.

Q. How close may a train follow a train carrying passengers?

A. Not less than ten minutes.

Q. How far apart must other trains keep?

A. At least five minutes, except when closing up at station, or if local rules require a greater clearance.

Q. May one train follow another by a station less than the time required if necessary to close up at the next station?

A. No.

Q. May a train arrive at a station in advance of its schedule arriving time, or leave in advance of its schedule leaving time?

A. No.

Note: In the following it is assumed that first class trains must be cleared and second class and extra trains must be prepared to stop. (Rule 93).

Q. Within yard limits may the main track be used on the time of a first class train, and how?

A. Yes, under protection.

Q. Must a first class train protect against another first class train that is due or overdue?

A. Yes.

Q. If no first class train is due, may the main track be used without protection?

A. Yes.

Q. Assuming that there are only two classes of trains, if a second class or extra train enters a yard and collides with a train, engine or cars within the yard, with whom does the responsibility rest?

A. The crew of second class or extra train entering yard.

Q. When the view is obscure by fog or otherwise should extra precautions be taken?

A. Yes.

Q. Within yard limits must a section of a first class schedule protect against a following section of the same or any other first class schedule or first class train that is due?

A. Yes.

Q. If a train overtakes another train so disabled that it can not proceed, how should it be governed?

A. Pass it if practicable, and proceed on its own authority. If it has no authority it should assume the authority (right or schedule) of the disabled train if it is such that it will permit further movement to a point of communication, and there report to Dispatcher.

Q. How should disabled train proceed when able?

A. Assume the right or schedule and take the train orders of the last train with which it has exchanged, and proceed to and report from the next available point of communication.

Q. May a section pass a section of the same schedule if disabled?

A. Yes, they may also pass them under Rule 85.

Q. May an extra pass a regular train or a regular train pass an extra if disabled?

A. Yes.

Q. If the disabled train is of greater importance than the train that overtakes it, and all it needs is an engine, should the train that overtakes the disabled train give it their engine and permit the disabled train to move first?

A. Yes.

Q. May more than one exchange be made if it will facilitate the movement of trains?

A. Yes.

Q. If a train is unable to proceed against an opposing superior train and it is overtaken between communicating stations by a following train of the same class or inferior train having right or schedule to proceed against all opposing trains, how should train that is overtaken be governed?

A. After ascertaining that following train has right or schedule permitting it to proceed from point where overtaken against all trains, and the move to be made is thoroughly understood, proceed on the authority of the following train to the next available point of communication.

Q. To whom must preceding train report on arrival at next available point of communication and what notification must be given opposing trains met?

A. Report to the Dispatcher. All opposing trains met while moving under these circumstances must be notified that the expected train is following.

Q. If a train is preceding a train under second paragraph of Rule 94, should it leave any station ahead of the schedule or violate any restricting order held by the train it is preceding?

A. No, the preceding train by virtue of the authority of this rule is moving under the authority and restrictions that have been placed on the following train.

Q. May two or more sections be run on the same schedule?

A. Yes.

Q. Has each section equal time-table authority?

A. Yes.

Q. May a train display signals for a following section without orders from \_\_\_\_\_?

A. No. (Under Rule 85 the exchange of orders authorizes the display of signals.)

Q. On single track if a section takes down signals at any point before the following section arrives, and there is no register, how must conductor, or engineman if no conductor with the train, be governed?



A. Arrange in writing with the operator; if no operator, with the switchtender (if competent); in the absence of both, with a flagman left there for that purpose, to notify all opposing trains that section for which signals were displayed has not arrived.

Q. If after a section takes down signals at a station where there is no register, and it proceeds before the following section arrives, and the following section arrives with green signals, must it make the same arrangement, even though they do not exist beyond that point?

A. Yes.

Q. If signals are taken down at a register station where all trains register, would it be necessary to make this arrangement with the operator?

A. No, the register protects the following section.

Q. If signals are taken down at a register station where some opposing inferior train is permitted to pass without registering and checking register, should the arrangements be made as required by Rule 96 the same as at a station where there is no register?

A. Yes.

Q. Does this rule (96) apply at a point where trains pass from double to single track?

A. Yes, if no register, opposing trains moving from double to single track must be notified as provided in the rule.

Q. When signals for a following section are taken down at a point not a register station before the following section arrives, in addition to notice being given as provided by Rule 96, how must conductor be governed?

A. Conductor must notify all opposing trains of the same class and opposing inferior trains met until the next register station is reached, and then register signals displayed to the point where they were taken down in the space provided on the register.

Q. If a special rule permits an opposing train of the same class or an opposing inferior train to register by ticket at the register station where such notation is made on the register, should conductor, after registering signals displayed to the intermediate point, also arrange with the operator to notify those opposing trains that are not required to check the register?

A. Yes.

Q. On single track may extra trains be run without orders?

A. No.

Q. On double track may extra trains be run without orders?

A. No, not unless so authorized by special rules.

Q. How must trains approach the end of double track, junctions, railroad crossings at grade and drawbridges?

A. With caution. Where required by rule or law trains must stop.

Q. How should trains entering a siding be governed?

A. Proceed with caution expecting to find it occupied by other trains.

## PROTECTION OF TRAINS.

### Rules 99 and 100.

Q. Should a flagman be stationed at or near the rear of all trains at all times?

A. Yes.

Q. When a train stops under circumstances in which it may be overtaken by another train, what must be done?

A. A flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes and when necessary, in addition, displaying lighted fuses.

Note: If there is a local rule requiring the placing of one torpedo as a stop signal same should be complied with, and it should not then be considered the same as two.

Q. When may flagman return to train?

A. When recalled by the authorized whistle signal if safety of train will permit.

Q. When conditions require must torpedoes be placed and a lighted fusee displayed?

A. Yes.

Q. Must the front of a train be protected in the same manner when necessary, and by whom?

A. Yes, by the head brakeman and, if he is not available, by the fireman.

Q. When a train is MOVING under circumstances in which it may be overtaken by another train, what action must flagman take?

A. He must take such action as may be necessary to insure full protection. By night, or by day when view is obscured, lighted fusees should be thrown off at proper intervals.

Q. When from weather or other conditions day signals can not be plainly seen, what must be done?

A. Night signals must be displayed in addition to the day signals.

Q. Who is responsible for the protection of their trains?

A. Conductor and engineman. If no conductor, the engineman.

Q. If rear brakeman (or flagman) fails to properly protect rear of train, even though he has not been instructed by conductor to do so, who would be held responsible?

A. The brakeman (or flagman) for not properly protecting without being instructed. The conductor would also be held responsible except perhaps when his duties required him to be at a place where he must depend on the flagman to perform this duty without being told. This, however, is a matter to be decided by the proper official.

Q. With what signals must a flagman equip himself for flagging during the day?

A. A red flag and torpedoes. If foggy or stormy weather he must have night signals in addition.

Q. With what signals must a flagman equip himself for flagging during the night or when he goes out late in the day when night may overtake him before he returns?

A. A red light, a white light, torpedoes and fuses.

Q. Should flagman be dressed warmly during cold weather or blizzards so he will not have to return until relieved by another flagman?

A. Yes.

Q. In extremely cold weather should conductor if necessary arrange to relieve flagman by sending out another one to replace him?

A. Yes.

Q. In blinding snow or sand storms or when the snow is fresh and no road broken should train take extra precautions and when practicable put off flagman and pull away from him to quickly create a sufficient and safe distance between flagman and rear of train?

A. Yes.

Q. When returning after being recalled when such conditions exist should extra precautions and care be taken to prevent being overtaken while flagman is returning?

A. Yes.

Q. If necessary should extra or additional torpedoes be placed and fuses used?

A. Yes.

Q. If there is straight track or open country to the rear for a sufficient distance, no fog, sand storms, trailing smoke or other conditions to obstruct the view and flagman stationed at rear of train sees a train approaching, what should he do?

A. Go out immediately a sufficient distance and place torpedoes.

Q. Is the placing of torpedoes imperative even though flagman is out a safe distance ready to give approaching train a stop signal?

A. Yes.

Q. When is the most critical time in protecting rear of train?

A. When returning to train.

Q. If a flagman is whistled out should he go whether he considers it necessary or not?

A. Yes, obey the signal.

Q. If after getting out a distance short of what would be considered a sufficient distance for full protection flagman is recalled, how should he be governed?

A. If conditions require it keep going until a sufficient distance is reached and place torpedoes and, if necessary, fuses.

Q. If flagman sees or hears a train coming should he continue to go back or, if out a sufficient distance, remain and stop the train even though he has been called in?

A. Yes.

Q. Before returning regardless of the distance flagman is out, should torpedoes be placed and when necessary, fuses displayed?

A. Yes, if conditions require it.

Q. When returning to train where view is obscure at night or snow or sand storms during the day, should lighted fuses ~~be~~ be displayed at intervals?

A. Yes.

Q. Must flagman depend on automatic block or interlocking signals to protect rear of his train?

A. No, not unless special instructions permit.

Q. Are flagmen permitted to have previous understandings with crews of following trains to look out for them at certain points in order to avoid protecting as per Rule 99?

A. No.

Q. If an engineman stops train for reasons of his own may he call in flagman when ready without instructions from his conductor?

A. No, train crew may not be ready to go.

Q. When pulling out of a siding or moving from a diverging route to a main route at a junction how must you be governed?

A. Protect against following trains.

Q. Must it be assumed there is a train following even though none has been passed?

A. Yes.

Q. If flagman receives instructions to hold, for example, all except first class trains for the arrival of an opposing train, should he take the equipment or general make-up of the train into consideration in determining what train it is?

A. No, stop all of them, then permit first class trains to proceed.

Q. If moving east on double track and it becomes necessary to cross over to permit a train to pass, how would you be governed?

A. Send flagman east to hold westward trains on westward track and a flagman west to protect rear of train while on eastward track and also to protect rear while on westward track against a train which the Dispatcher may be moving against the current of traffic.

Q. Should an engineman, when it is possible to do so, stop his train where a good view to the rear can be had?

A. Yes, good judgment in this may sometimes prevent an accident.

Q. When a passenger train is stopped by a flag, should it stand with any part of train on a bridge, if it can be avoided?

A. No.

Q. When running at high speed over a bridge, should engineman apply the brakes, if it can be avoided?

A. No. Brakes should not be applied while on a bridge.

## TRAIN PARTED.

### Rule 101.

Q. If train parts, what action must be taken?

A. Give train parted signals and, if possible, prevent rear portion from running into front portion.

Q. May the detached portion be moved or passed until the front portion comes back?

A. No.

**Q.** How should front portion be governed in returning for detached portion?

**A.** If view is obscure, be preceded by a flagman, and in all cases run under control.

**Q.** May it be possible the train has parted in more than one place?

**A.** Yes.

**Q.** If the head end of train should run to next point of communication with Dispatcher, and he has been informed of location of rear portion, may he authorize front portion to go back without necessary protection or may Dispatcher have them clear main track and authorize a following train to pass the rear end and proceed, or to push the rear end ahead of them to point where front portion is waiting?

**A.** No.

**Note:** Use these questions and answers only where 19 form order is used by special permission to restrict superiority of a train and numbers of orders on clearance card checked by Dispatcher.

**Q.** Must conductor and engineman obtain all orders designated on clearance and read them before passing fouling point at which an opposing train would take the siding?

**A.** Yes.

**Q.** If a train leaves a station without all orders designated on their clearance card, who is responsible?

**A.** Conductor and engineman.

**Q.** If there are order numbers on the clearance card must the time it is O. Kd. and Superintendent's initials appear in space provided?

**A.** Yes, and if not, train must stop at once and obtain a new clearance which complies with the requirements.

**Q.** If a clearance is received, no orders designated thereon, but the time of O. K. and Superintendent's initials are on the clearance, how should conductor and engineman be governed?

**A.** Stop and either obtain a clearance, with order numbers thereon or one without the time of O. K. and Superintendent's initials.

**Q.** How are enginemen required to run by stations where 19 form orders are to be received?

**A.** At a speed slow enough to permit the delivery of orders without endangering the life of the operator and to permit of the reading of the orders before passing the fouling point.

### **PROPER HANDLING OF SWITCHES, PROPER POSITION OF SWITCHES, PUSHING CARS AHEAD OF ENGINE.**

#### **Rules 102 to 106 Inclusive.**

**Q.** When cars are pushed by an engine (except when shifting or making up trains in yards) what position must trainman take?

**A.** A conspicuous position on front of leading car.

**Q.** Should other train or yard men be so placed that signals can be passed to engineman when the view is obstructed and the trainman on leading car can not be seen?

**A.** Yes.

**Q.** How must information respecting condition of track or bridges be issued?

**A.** In writing.

**Q.** How must switches be left after using them?

**A.** In their proper (normal) position.

**Q.** Who is responsible for position of switches after being used by a train?

**A.** Conductor, except where switchtenders are stationed.

**Q.** Is it permissible to leave a switch open for a following train?

**A.** No.

**Q.** May arrangements be made in advance by trainmen of two crews for one to leave switch open for the other?

**A.** No.

**Q.** Should trainman stand near a switch when a train is passing, especially if it is a facing point switch?

**A.** No, he should take position on opposite side of track or a reasonable distance from switch until rear of train has passed over it.

**Q.** When heading in a siding should rear man get off head end of caboose to close switch?

**A.** It is much better to get off rear of caboose.

**Q.** After taking main track, closing and locking switch, should brakeman notice switch point to see if it is up against the stock rail where it belongs? Should he also notice the opposite point to see if it has properly cleared the opposite rail?

**A.** Yes.

**Q.** When taking siding should train be pulled clear of fouling point before stopping for brakeman who closes the switch?

**A.** Yes.

**Q.** Under conditions not provided for in the rules who is responsible for the safety of the train and observance of the rules?

**A.** Both conductor and engineman.

**Q.** In case of doubt or uncertainty what must be done?

**A.** Take the safe course.

**Q.** Should Rule 106 be accepted as an excuse for ignorance of the rules?

**A.** No.

**Q.** Unless properly protected, should a train pass between the platform and another train that is receiving or discharging passengers?

**A.** No.



## MOVEMENT OF TRAINS BY TRAIN ORDERS.

### Rules 201 to 223 Inclusive.

- Q. Over whose signature must train orders be issued?  
A. The Superintendent or other official designated by the Rules.
- Q. Must they be brief and clear and in prescribed forms when applicable?  
A. Yes.
- Q. If an order is not thoroughly understood what should be done?  
A. Ask for an interpretation of it and not move until understood.
- Q. May an order be issued that is not according to prescribed form if necessary?  
A. Yes, provided there is not a form that will answer the purpose.
- Q. How are orders to be numbered?  
A. Consecutively each day beginning at midnight.
- Q. When more than one set of Dispatchers are working on a Division, or Subdivision, should each set use a different series of numbers?  
A. Yes.
- Q. If you get an order numbered with a fraction, as 29½, what does it mean?  
A. It means that Dispatcher has discovered he had issued duplicate numbers and added the fraction to make them different.
- Q. To whom must orders be addressed?  
A. To those who are to execute them.
- Q. Must a copy for each person addressed be supplied?  
A. Yes.
- Q. How must conductors and enginemen regard orders restricting their movement that are addressed and completed to an operator and delivered to them, and must such order numbers appear on the clearance card where other order numbers must be shown?  
A. The same as if addressed to conductor and engineman. Order numbers must appear on clearance card the same as other orders.
- Q. How must regular trains be designated in train orders transmitted by telegraph?  
A. As No. 10 or Second 10 (section spelled), extra trains by their engine numbers and direction as Extra 76 "East" or "West".
- Q. How should stations, regular trains and other numerals be designated in train orders transmitted by telephone?  
A. The names of stations must be plainly pronounced and then spelled letter by letter, thus: Aurora A-u-r-o-r-a; all numerals must first be given and then followed by spelling, thus: 105 o-n-e n-a-u-g-h-t f-i-v-e; words duplicating numerals

should not be written upon train orders. The number of the section should be first pronounced, thus: Second S-e-c-o-n-d, the receiver writing only the word "Second" on the order. Orders should be repeated in the same manner.

Q. Is an order issued on the 19 form just as effective as if issued on the 31 form?

A. Yes, and after having been received by those to whom addressed it is equally as safe.

Q. When a 19 form order restricts the superiority of a train at a point where the order is received how should it be delivered?

A. Operator must first permit the train to stop.

Q. When an order is issued to a superior train at the meeting point what should be stated in the order?

A. This order to \_\_\_\_\_ at \_\_\_\_\_.

Q. Should the inferior train receiving an order with such statement therein approach the meeting point expecting superior train to arrive unaware of their presence, and what extra precautions should inferior train take?

A. Yes. If conditions warrant owing to obscure view or train order signal between the inferior train and switch at which they must enter, stop far enough out to be safe and send a flagman ahead before attempting to pull in to siding.

Q. Should a conductor or engineman run on an order that is scratched, changed, interlined, underlined or so dim or flourished, that it is not perfectly plain?

A. No.

Q. Should figures in train orders be surrounded by circles, brackets or other characters?

A. No.

Q. Should conductors and enginemen accept 31 form orders that do not show the time repeated?

A. No.

Q. Is it compulsory on part of Dispatcher to complete all 19 orders as soon as repeated?

A. No.

Q. Should conductors and enginemen accept orders that do not show that the X response was sent?

A. Yes, all orders are not X'd and the X response does not concern conductors and enginemen.

Q. Who should sign 31 orders?

A. Those to whom addressed except the engineman unless there is no conductor with the train.

Q. Should conductors and enginemen run on orders not completed?

A. No.

Q. Should a conductor or engineman sign a 31 order which has the complete or any part of the complete on the order?

A. No.

Q. Should an engineman sign a conductor's name to a 31



train order, or a conductor sign an engineman's name when addressed only to the engineman?

A. No.

Q. Name some 31 train orders that an engineman is required to sign.

A. 31 train order receipting for a new time-table, order delivered to train at a point not a train order office or at a closed office, order sent to a train in care of an engineman, when running light without a conductor, when addressed to an engineman of an engine helping a train to authorize them to run after cutting out and when engine is by train order signal or train cleared before order is received.

Q. May the rules require that conductors deliver 31 train orders personally to enginemen?

A. Yes.

Q. Is any one required to sign a 19 order?

A. No.

Q. If it will take an operator away from the immediate vicinity of his office to deliver a 19 order personally to engineman, may it be delivered by conductor if rule so authorizes?

A. Yes.

Q. If rules authorize the delivery by the conductor, should a brakeman be permitted to do so?

A. No.

Q. To whom must enginemen show their orders?

A. To firemen and when practicable to forward trainmen.

Q. To whom must conductor show his orders?

A. To his trainmen when practicable.

Q. If an operator offers conductor and engineman an order not completed stating he is unable to obtain complete from Dispatcher owing to wire failure, may it be accepted and used?

A. No.

Q. When an order is to be delivered to a train at a point not a train order office, or at one at which the office is closed, in whose care should it be sent?

A. In care of a conductor, an engineman or any other employe whom it may be necessary to send it in care of. An order should not be sent in care of two persons as C&E of \_\_\_\_\_, or Care of No. \_\_\_\_\_.

Q. If a 31 form how will the complete be given?

A. Upon the signature of the employe in whose care it is sent and this complete will be accepted by train addressed the same as if completed to conductor or engineman of that train. Order must then be acted upon in the usual way.

Q. If a 31 form order how many copies shall be furnished to employe in whose care order is sent?

A. A copy each for conductor and engineman addressed and one upon which both their signatures must be taken.

Q. What disposition must be made of the copy upon which signatures are taken?

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A. Leave it with the first operator accessible who must immediately send the signatures preceded by order number and followed by the train number to the Dispatcher, and then place it on file.

Q. If an order to be sent to a train at a point not a train order office or one at which office is closed restricts the train at that point, that is, instructs them to remain there for an inferior train to be moved against them, or in any way prevents them from making a move they could otherwise make, what must be done before complete is given to the inferior train?

A. Signatures of conductor and engineman of train addressed must be received by Dispatcher from the operator to whom the copy with signatures is delivered.

Q. If a 19 form order is addressed to conductor and engineman of a train at a point not a train order office or one at which office is closed, how many copies should operator deliver to person in whose care order is sent?

A. Two copies, one each for conductor and engineman addressed.

Q. If a 31 form order is addressed to conductor and engineman of train at point not a train order office or one at which office is closed, and also addressed to conductor and engineman of train in whose care the order is sent, how many copies must be made?

A. Five, two for each train addressed and one for signatures of conductor and engineman to whom sent to be left with first operator accessible.

Q. If a 19 form order is addressed in same manner, how many copies must be delivered?

A. Four, one for each conductor and engineman of trains addressed.

Q. When more than one engine on a train, how many copies?

A. For every additional engineman on either train addressed an additional copy should be furnished.

Q. If a 19 form order is sent in care of conductor of a train that does not stop at the point where order is received, how should it be handled?

A. Deliver two copies to conductor and an extra copy to engineman, and vice versa if sent in care of engineman.

Q. When a train is named in an order by its schedule number alone, what does it include?

A. All sections of that schedule are included and each must have copies delivered to it.

Q. If an engine has passed the train order signal or train has been cleared, and operator requests conductor and engineman to sign a 31 form order must they do so?

A. Yes.

Q. If operator does not make such request how should order be regarded when received?

A. It must be respected.

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Q. How long are train orders in effect?

A. Until fulfilled, superseded or annulled.

Q. How is an order fulfilled?

A. By complying with every requirement.

Q. How is an order or a part of an order annulled?

A. By another order stating that fact, for example:

*"Order No. 10 is annulled" or "That part of Order No. 10 reading is annulled."*

Q. How is an order superseded?

A. By issuing another order instructing a train to do differently from what they were previously instructed to do. The words "instead of" must be used.

Q. Is there any other way of superseding an order?

A. No.

Q. May a part of an order be annulled or superseded without effecting the remaining portion of the order?

A. Yes.

Q. After an order or part of an order has been annulled or superseded may the same instructions again be issued as a new order under a new number?

A. Yes, it is then a new order.

Q. If an order is received annulling a schedule or the schedule on which a train may be running becomes more than 12 hours late, how must all orders, held by other trains respecting the train authorized by such schedule, be considered?

A. These orders become void and trains effected may proceed the same as if such orders had never existed.

Q. If an order addressed to a regular train is held by an operator, and the operator receives the annulment of the schedule authorizing such train, or such schedule becomes more than 12 hours late at his station, how should he be governed?

A. File the order for the train effected provided such order effects it within the territory where schedule is annulled, if not annulled over entire run, as it then becomes void. If schedule becomes more than 12 hours late at his station, the order is void.

Q. Would this effect any other movements in the order or other trains addressed?

A. No.

Q. If a conductor or engineman (or both) is relieved before the completion of a trip, how must all train orders and instructions held by them be handled?

A. They must be delivered to relieving conductor and engineman and must be compared by them before proceeding.

#### RULE 221 A NORMAL POSITION STOP.

Q. Under Rule 221-A normal position of train order signal STOP, if operator after delivering orders places signal in proceed position, may train proceed?

A. Yes.

Q. When may a train pass a train order signal?

A. When the proceed signal is received.

Q. When may a train order signal be fastened at proceed?

A. Only when an operator is off duty.

#### RULE 221 B NORMAL POSITION PROCEED.

Q. When must train order signal indicate STOP?

A. When trains are to be stopped for orders.

Q. If there are orders for any train in the direction governed by the signal may the operator display a proceed signal?

A. No.

Q. While stop is indicated how may a train proceed?

A. Only by obtaining a clearance card, Form (A). See page 104.

#### RULE 221 NORMAL POSITION STOP, AS USED ON MANY RAILROADS.

Q. In what position must engineman see train order signal when he first comes in view of it?

A. Stop position, if not he must stop as it is an improperly displayed signal.

Q. If signal is seen in stop position, what is required of engineman?

A. When within a reasonable distance where whistle signal can be heard by operator he should call for the signal by giving four short sounds unless rule permits the whistle for station to answer the same purpose.

Q. After giving the whistle signal if operator displays signal at PROCEED how should engineman be governed?

A. Answer by two short sounds of the whistle and proceed if there is nothing else preventing (not required on some roads).

Q. If proceed signal is not received, how should engineman be governed?

A. Stop, obtain a clearance card and all orders designated thereon, if such designation is required; if not, then a clearance card and any orders operator may have for them.

Q. If order numbers must be indicated on clearance cards, or the total number of orders received (if only necessary that total number be designated) do not correspond, how should engineman and conductor be governed?

A. Stop and obtain them.

Q. If a clearance is not addressed to the train receiving it, how should conductor and engineman be governed?

A. Stop, and obtain one that is so addressed.

Q. Are conductors required to be in a position where train order signal can be seen before passing it and where they may pick up 19 train orders without stopping if operator is ready to deliver them?

A. Yes.

Q. May conductor delegate one of his brakemen to perform this duty?

A. No.

**Q.** If on approaching a train order signal at any hour both semaphores indicate proceed and at night a green light in addition, how should train be governed?

**A.** Consider the office closed and proceed the same as if it was not there.

**Q.** If necessary to see train order semaphore at stop when approaching it and semaphore is at proceed governing in the direction train is moving, but at stop for trains in opposite direction, what does it indicate?

**A.** Stop, improperly displayed signal and open office.

**Q.** If in this case operator can not be found, how should train be governed?

**A.** Remain until a clearance card can be obtained or proceed under protection of flag as a last resort.

**Q.** If only one semaphore on the mast can a closed office be indicated?

**A.** No.

**Q.** May a train order signal be called for more than once?

**A.** Yes, if conditions are such there is a possibility the operator did not hear it.

**Q.** If a train order signal is at stop and proceed is not given before engine passes, and a closed office is indicated before train is ready to leave, how should train be governed?

**A.** Obtain a clearance before leaving.

**Q.** If a signal light is not displayed at a night office, how should trains be governed?

**A.** Those who have not been notified must stop and ascertain the cause and if it indicates proceed report the fact to the proper official from the next point of communication.

**Note:** Some roads require train to obtain clearance cards or flag to next point of communication unless the office is closed.

**Q.** If the train order signal is out of order, what must be done?

**A.** Conductors and enginemen must be notified and hand signals used. If normal position is stop, a red signal must be displayed until it becomes necessary to clear a train by signal, then the red signal must be removed and a proceed (green) signal displayed after engineman calls for signal. After rear of train is by remove proceed signal and display red (stop) signal.

**Q.** What is the abbreviation for complete?

**A.** "Com".

**Q.** May the usual abbreviations for names of the months and stations be used?

**A.** Yes.

**Q.** If a proceed train order signal is received and operator again displays a stop signal before engine is by, would engineman be justified in assuming train was properly cleared?

**A.** No.

**Q.** If engineman receives a proceed signal and STOP is displayed before markers have passed, should the train be stopped?

**A.** Yes.

**Q.** If a time-table designates a train order office and train order semaphores are removed, is this sufficient to indicate a permanently closed office?

**A.** No, instructions closing the office should be issued.

## QUESTIONS AND ANSWERS.

### TRACK ORDERS.

**Q.** After receiving an order respecting condition of track, bridges, etc., how long does it apply?

**A.** Until train reaches the end of the Division or Subdivision, if subdivided and applies to Work Extras until tied up for the day.

**Q.** When ready to leave initial station of a Division or Subdivision on a new train, or commencing work on a day following, if such order is not received, should it be considered in effect?

**A.** No.

**Q.** If track order is received when starting on a run and engine and crew make several short trips between intermediate stations, round trip, work extra or otherwise, should such order be considered in effect while making such trips?

**A.** Yes.

**Q.** When an order requires a specified speed over a piece of track, bridge, etc., does it mean that no part of train must be moved over it at a speed greater than that specified?

**A.** Yes.

**Q.** Should a speed of a specified number of miles per hour or train required to consume a specified number of minutes per mile be specified in an order when possible to do so?

**A.** Yes.

**Q.** If an order is received to run carefully or run slow, how is it to be considered?

**A.** It is then a matter of judgment on part of engineman. Such orders are indefinite.

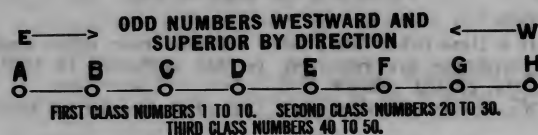
**Q.** Should track orders be respected even though information is received from another source that track is good for normal speed?

**A.** Yes.



## QUESTIONS AND ANSWERS—TRAIN ORDERS FORM

### A—MEETING POINT.



#### ORDER 1

*No. 21 meet Extra 72 East at E.*

#### ORDER 2

*Extra 72 East has right over No. 21 E to G.*

**Q.** If Extra 72 East with Order 1 on arrival at E, No. 21 not having arrived, received Order 2, may it leave E? If not, why?

**A.** No. Order 1 is in effect until fulfilled, superseded or annulled, and must be annulled before Extra 72 East can use Order 2.

#### ORDER 3

*No. 7 meet No. 8 at D instead of E,  
No. 8 receives this order at D.*

**Q.** Which train should under ordinary conditions take siding at D, and why?

**A.** No. 7, No. 8 will keep the main track at D expecting to go to meeting point E until it receives Order 3 at D. No. 7 having received Order 3 prior to reaching D should head in to prevent both trains occupying the main track at D.

#### ORDER 4

*No. 22 meet No. 23 at F.*

**Q.** If on No. 22 and First 23 is at E, a station beyond the meet, how should No. 22 be governed?

**A.** Proceed to F and meet the remaining sections of 23.

**Q.** When a train is named in an order by its schedule number alone, what does it include?

**A.** All sections of the schedule.

#### ORDER 5

*No. 24 meet First 25 at D.*

**Q.** If No. 24 finds First 25 at C, how should it be governed?

**A.** Remain at C and get a flag out ahead to protect against Second 25.

**Q.** If First 25 flags to C for No. 24, should First 25 depend entirely on the whistle of engine to protect No. 24?

**A.** No. First 25 should flag and notify No. 24 of their arrival.

#### ORDER 6

*No. 27 take siding, meet No. 24 at F, No. 26 at E and No. 28 at D.*

**Q.** Where should No. 27 take siding?

**A.** At F, E and D.

#### ORDER 7

*No. 23 meet No. 24 at D.*

#### ORDER 8

*No. 23 meet Second 24 at C.*

**Q.** If First 24 is at D on arrival of No. 23, and No. 23 is given Order 8, what should No. 23 do?

**A.** Remain at D until Order 7 is annulled, or an order received to meet Second 23 at C instead of D.

#### ORDER 9

*No. 21 meet No. 22 at E.*

#### ORDER 10

*No. 21 meet No. 22 at D.*

**Q.** How should No. 21 be governed with both Orders 9 and 10?

**A.** Remain at E until Order 9 is fulfilled, superseded or annulled, or until No. 22 becomes more than 12 hours late or is annulled as both orders are in effect and neither must be violated.

**Q.** How should No. 22 be governed with both Orders 9 and 10?

**A.** Remain at D for the same reason No. 21 remains at E.

**Q.** What is the result, and who is responsible for the condition?

**A.** Nos. 21 and 22 are held a station apart waiting for each other. The Dispatcher is at fault for omitting "instead of".

#### ORDER 11

*No. 41 meet No. 42 at D.*

#### ORDER 12

*No. 41 meet No. 42 at C instead of D.*

#### ORDER 13

*Order No. 12 is annulled.*

**Q.** After Order 13 is received how should No. 42 be governed?

**A.** Clear No. 41's schedule. Get a flag out immediately if No. 42 is then due or overdue.

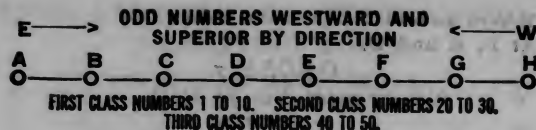
**Q.** Why can not No. 42 go to D for No. 41 after Order 13 annuls the meet at C?

**A.** Order 12 superseded Order 11, therefore there is no order to meet at D.

#### ORDER 14

*Eng 71 run extra H to A and meet Extra 72 East at F.*





**ORDER 15**

*Extra 71 West meet Extra 72 east at E instead of F.*

**ORDER 16**

*Order No. 15 is annulled.*

**Q.** Where is the meeting point between Extras 71 and 72 after Order 16 is issued?

**A.** There is none. Order 15 superseded the meet at F and the meet can not be used again. Order 16 annulled the meet at E, leaving the two extras without a meeting point, provided neither extra had been annulled prior to the issue of Order 16.

**Q.** How should Extra 71 be governed?

**A.** Proceed on its running order.

**Q.** If Extra 72 holds authority to run and there is a collision between the two extras, who is at fault?

**A.** Dispatcher.

**ORDER 17**

*No. 1 meet No. 2 at D.*

**ORDER 18**

*No. 1 meet No. 2 at C instead of D.*

**ORDER 19**

*No. 1 meet No. 2 at D instead of C.*

**Q.** Are Orders 17, 18 and 19 according to form?

**A.** Yes.

**Q.** If Orders 18 and 19 are received at the same office which should be considered first?

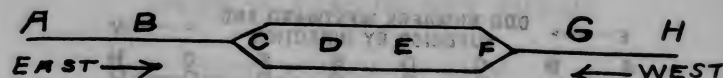
**A.** Order 18, the earliest issued.

**Q.** Would the Dispatcher be using good judgment in issuing orders in this manner? If not, how should they be issued?

**A.** No. Dispatcher should annul Order 18 and make the meet at D.

**Q.** If Order 19 read "meet at B instead of C" would it be proper and safe?

**A.** Yes.



**ODD NUMBERS WESTWARD AND SUPERIOR BY DIRECTION ON SINGLE TRACK.**

**ORDER 20**

*No. 3 meet No. 4 at B.*

**ORDER 21**

*No. 4 meet No. 3 at C instead of B.*

**Q.** Provided no order is received moving No. 3 against the current of traffic or singling the double track, how should No. 4 be governed on arrival at C, the end of double track, if No. 3 is not there?

**A.** Proceed with current of traffic but not beyond F until it is known that No. 3 has arrived.

**Q.** Is a meet order the best one to use in this case?

**A.** No. Form C (right order) is preferable and should be used.

**Q.** How should No. 3 be governed on arrival at C?

**A.** Must not leave C until it is known that No. 4's schedule has been fulfilled into C.

**ORDER 22**

*Eng 76 run extra A to H and meet Extra 77 West at C.*

**Q.** If Extra 77 West is between H and F, should the order be issued in this form?

**A.** No, as there is nothing to prevent Extra 76 East from leaving F before the arrival of Extra 77 West. However Extra 76 East should question the order before leaving F.

**Q.** Under what circumstances should the above order be issued?

**A.** Only when Extra 77 West is at F or C, or between those points on the double track.

**Q.** If Extra 77 West is between H and F, how should the order be given?

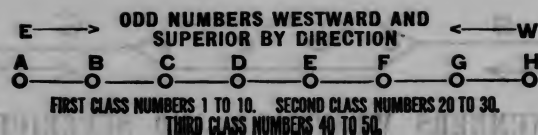
**A.** Eng. 76 run extra A to H has right over Extra 77 West A to C and not leave F unless Extra 77 West has arrived.

**Q.** If it is desired to start an extra east from C and Extra 77 West holds running orders H to A and has not arrived at F, or their arrival at F is not known, how should the order be issued?

**A.** Eng 76 run extra C to H and meet Extra 77 West at F.

**Q.** Would it be necessary to give Extra 77 West a copy of the order?

**A.** No.



Q. If Extra 79 West is by B and it is desired to run Engine 76 extra A to H, how should the order be given?

A. Eng 76 run extra A to H and meet Extra 79 West at A, or, after the arrival of Extra 79 West at A Eng 76 run extra A to H. (The last is preferable.)

Q. Eng 79 run extra H to A and meet Extra 80 East at G. If G is a registering station and an Extra 80 East appears on the register at G, but not in sight, how should Extra 79 West be governed?

A. Check the time of arrival of Extra 80 East and if it is later than the time the order making the meet with Extra 79 West was repeated or X response sent, if X'd, proceed unless a special rule or instructions require Extra 79 West to see Extra 80 East at G, or obtain an order superseding or annulling the order, or one stating that Extra 80 East has arrived at G on Order No. —.

Q. If Extra 80 East had right over Extra 79 West to G, how should Extra 79 West be governed if an Extra 80 East appears on the register at G?

A. The same as if it was a meet.

Q. No. 9 meet No. 8 at D, a register station. If on No. 9 and No. 8 is in the east end of yard at D displaying markers and without signals, has No. 8 been met under the order?

A. No. No. 9 must check register at D as No. 8 may have displayed signals to D and took them down, and then moved to east end of yard.

Q. If under this order No. 8 is not seen before reaching the register, would it be necessary for No. 9 to check the register for No. 8, and why?

A. Yes. No. 8 may have arrived and engine and equipment turned back, or first section may have arrived, registered in, taken down signals and backed up to west end of yard.

Q. If No. 8, or any section of No. 8, does not appear on the register, and No. 9 finds No. 8 in the west end of the yard without signals, may No. 9 proceed, and why?

A. Yes, if No. 8 is displaying signals to D it must not take them down until it arrives and registers in.

Q. If No. 2 receives a meet with No. 1 at H, the end of the Division or Subdivision, and the same crew leaves H on No. 2 on another Division or Subdivision holding a meet with No. 1 at J, should order read "instead of H"?

A. No. However, had No. 2 been given right over No. 1 to H instead of a meet a question of this kind could not arise.

## FORM B—PASS OR RUN AHEAD.

### ORDER 23

*Extra 75 West run ahead  
of No. 9 F to D.*

Q. How should No. 9 run F to D?

A. Should run with caution, looking out for Extra 75 West ahead, unless some form of block signals is used.

Q. Within automatic block system may No. 9 under Order 23, make its usual speed if signals indicate proceed?

A. Yes.

Q. If no block system and track is seen to be clear, may No. 9 make its usual speed?

A. Yes.

Q. If no block system and track ahead is obscure owing to fog, snow storms, canyons, tunnels or other obstruction, or at night, how should No. 9 be governed?

A. Proceed at a speed at which stop can be made if Extra 75 West is approached moving at a slower speed than No. 9, and avoid a rear end collision.

Q. If on Extra 75 West, no block system and view is obscure to rear, especially if making slow time, how should rear of train be protected?

A. By fusee, and if a stop is to be made, flagman should drop off and protect.

Q. If Order 23 authorized a regular train of a lower class than No. 9, and under same conditions as Extra 75 West, how should it be governed?

A. The same as Extra 75 West.

Q. If the first named train is overtaken before reaching D, would it be good judgment to let No. 9 pass and save further delay, or proceed to D where the order permits?

A. Under ordinary conditions it would be good judgment to let No. 9 by.

### ORDER 24

*Extra 95 West pass No. 5 at  
E.*

Q. How should Extra 95 West approach E?

A. Expecting to find No. 5 on main track.

Q. Should No. 5 keep the main track if it is practicable to clear and save delay to Extra 95 West, thereby saving delay to itself?

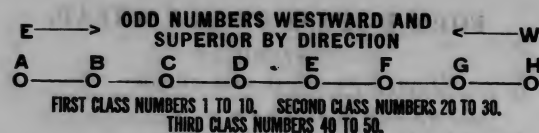
A. No.

Q. Should Dispatcher state in the order which train should take the siding at E?

A. Yes, if he is not in doubt as to existing conditions at E; if so, leave it to judgment of trainmen.

Q. After Extra 95 West passes No. 5 at D, do the same conditions then exist as between Extra 75 West and No. 9 under Order 23?

A. Yes.



#### ORDER 25

*No. 44 run ahead of No. 8  
until overtaken.*

Q. Should No. 8 approach all stations expecting to pass No. 44?

A. Yes.

Q. Does Order 25 relieve No. 44 from protecting when reducing speed or in taking siding at point where No. 8 is to pass?

A. No, No. 44 should take unusual precaution in protecting to rear, especially where view is obscure.

#### ORDER 26

*No. 1 pass No. 5 when  
overtaken.*

Q. How should No. 1 and No. 5 be governed under Order 26?

A. In the same manner as No. 44 and No. 8 under Order 25.

Q. When an inferior train receives an order to pass a superior train, does it authorize the inferior train to run ahead of superior train, and how far?

A. Inferior train is authorized to run ahead to the end of the run of its schedule or running order on the Division or Subdivision.

Q. If a train receives an order to pass another at a specified point, or when overtaken, and train to pass is displaying green signals, how should train to be passed be governed?

A. When passed or overtaken by the first section, all sections must be permitted to pass as ruled by A. R. A., Oct. 21, 1912.

Q. Should Dispatcher use examples under Form B to move a slow train ahead of a fast passenger train when same may be done with a time order?

A. No, only use the run ahead form in emergency cases.

#### FORM C—RIGHT OVER OPPOSING TRAINS.

#### ORDER 27

*No. 2 has right over No. 1  
C to F.*

Q. If No. 1 and No. 2 meet at either C or F, which should take siding?

A. No. 2.

Q. If No. 1 and No. 2 meet between C and F, which should take siding?

A. No. 1.

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Q. Under what circumstances may No. 1 leave F before arrival of No. 2?

A. Provided No. 1 can clear No. 2 as much as No. 2 was, before Order 27 was issued, required to clear No. 1 or as authorized by train order.

Q. Being trains of the same class, how much should No. 1 clear No. 2 between F and C?

A. No. 1 must be into clear of main track before No. 2's leaving time.

Q. If No. 1 reaches C clearing No. 2's time (either schedule or time order) how will No. 1 be governed?

A. Proceed on their run from C the same as if the order had not been issued.

Q. If No. 1 reaches a point between F and C for No. 2, what is conductor's duty?

A. Stop No. 2 and notify it of their arrival.

Q. If No. 1 failed to notify No. 2 in case they meet between F and C, what would be the result?

A. No. 2 probably not knowing it had met No. 1 would head in at F and wait for them, and, if F was a register station, would head in and be delayed until register could be consulted.

#### ORDER 28

*No. 4 has right over First  
3 B to D.*

Q. If First 3 clears No. 4 at C, what should it do?

A. Drop a flagman off to stop Second 3, and stop No. 4 and notify it of their arrival.

Q. When No. 4 is notified of First 3's arrival at C, what should it do?

A. Send a flagman ahead immediately to protect against Second 3. (It is understood rear is properly protected).

Q. May this condition exist when order is issued in this manner even though there is no time that can be cleared?

A. Yes, the second named train may flag to some station between those designated in the order and create the same condition.

Q. Should Dispatcher issue the necessary orders to prevent a condition of this kind when possible to do so?

A. Yes.

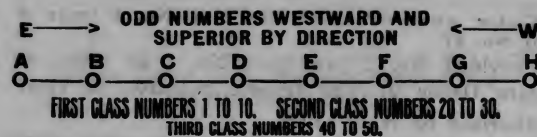
#### ORDER 29

*No. 8 has right over Second  
7 E to G.*

Q. How should No. 8 regard sections of No. 7 between E and G.

A. Clear the time of the first section, go to G and remain for second and following sections, if any, unless Second 7 is met between E and G. If met between E and G with green signals, protect and remain for last section unless additional orders permit further progress. If Second 7 is at

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F without signals, Order 29 is fulfilled and No. 8 may proceed to next register station and check as required by rule.

**ORDER 30**

*Extra 81 West has right  
over No. 26 G to D.*

**ORDER 31**

*Extra 81 West wait at F  
until 9:30 AM for No. 26.*

Q. How much must No. 26 clear Extra 81 West on the 9:30 A. M. wait?

A. Not less than five minutes.

Q. Were it not for Order 31, could No. 26 leave D before arrival of Extra 81 West?

A. No, not under Order 30 alone.

Q. If Second 2 holds right over No. 1 B to D may No. 1 leave D after No. 2 becomes due and First No. 2 has not arrived assuming that it may move against Second No. 2 until First No. 2 is met?

A. No, No. 1 must not move out of D unless it can clear the time of Second No. 2, and in this case it is impossible.

Q. If No. 4 is given a meet with No. 3 at F and later an order is issued giving No. 4 right over No. 3 F to H, how should No. 3 at H holding both orders be governed?

A. Remain at H. The issuance of orders in this manner is irregular. No. 4, however, should not leave F until the order to meet has been superseded or annulled.

**FORM E—TIME ORDERS.**

Q. Should an even hour be used in giving time of day in train orders?

A. No.

**ORDER 32**

*No. 10 run 30 mins late  
A to D.*

Q. What effect has Order 32 on the schedule of No. 10?

A. It makes the schedule time of No. 10 thirty minutes later from A to D, but does not effect the leaving time at D.

Q. What time should an opposing inferior train clear No. 10 at D?

A. Clear its schedule time not less than 5 minutes unless rules otherwise provide.

Q. May the Dispatcher start a first section of No. 10 from D on time after having issued this order?

A. Yes.

Q. When may Dispatcher start a first section of No. 10 from A, B or C?

A. Thirty minutes late on its schedule.

Q. How should an inferior train running ahead of No. 10 with Order 32 be governed?

A. Add 30 minutes to No. 10's time as shown by its schedule at A, B or C and clear as required by Rule 86. No. 10, being a first class schedule, the inferior train running ahead should be into clear at D at the time shown for No. 10 at C plus the 30 minute run late, unless the schedule time from C to D is less than the amount of time clearance required by Rule 86, then that clearance should be made.

Q. If No. 10 was a second or inferior class train what time should an inferior train running ahead of No. 10 clear at D, assuming the clearance required is 10 minutes?

A. Ten minutes before No. 10's schedule time at C plus the 30 minute run late.

Q. May No. 10 leave C thirty minutes late on its schedule and pass or leave D as early as it may be able to do so?

A. Yes, as the order expires when No. 10 is 30 minutes late at C.

**ORDER 33**

*No. 10 run 30 mins late  
A to D and 20 mins late  
D to H.*

**ORDER 34**

*Eng 85 run extra H to A.*

Q. May trains be governed the same between A and D under this order as under Order 32?

A. Yes.

Q. May No. 10 pass C 30 minutes late and leave D 20 minutes late under this order, distance, speed or dead time permitting?

A. Yes.

Q. What time should Extra 85 West clear No. 10 at G, F, E or D?

A. Clear No. 10's schedule time at the respective stations plus the 20 minute run late as required by Rule 87.

Q. When may Dispatcher start a first section of No. 10 from D, E, F or G?

A. Twenty minutes late on its schedule time.

Q. Should a train be run, say, 7 to 12 minutes late?

A. No, the time should be such as can be easily added to the schedule time, either ending in 5 or 0, preferably 0.

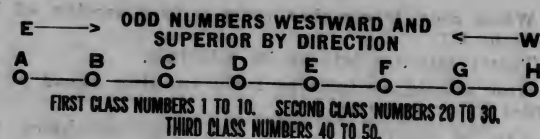
**ORDER 35**

*No. 5 run 30 mins late  
H to A.*

**ORDER 36**

*No. 5 run 40 mins late  
H to A.*





- Q. Does Order 36 supersede Order 35?  
A. No.
- Q. How late should No. 5 run?  
A. Not less than forty minutes late. In so doing, No. 5 fulfills both orders at the same time.
- Q. If Dispatcher should annul Order 36 (the 40 minute order) how late would No. 5 have an order to run?  
A. Thirty minutes late.
- Q. If holding both Orders 35 and 36 and Dispatcher annuls Order 35, how late should No. 5 run?  
A. Forty minutes late.
- Q. If Dispatcher should then annul Order 36, how late would No. 5 have an order to run?  
A. Would not have an order to run late.
- Q. Is it proper or necessary to supersede a run late?  
A. It is neither proper nor necessary.

**ORDER 37**

No. 7 run 40 mins late  
H to A.

**ORDER 38**

No. 7 run 30 mins late  
H to A.

**ORDER 39**

Eng 80 run extra A to H.

- Q. Does Order 38 supersede Order 37, and how late should No. 7 run?  
A. No. No. 7 must run not less than 40 minutes late?
- Q. If later the Dispatcher annuls Order 37, how late should No. 7 run?  
A. Not less than 30 minutes late.
- Q. If Extra 80 East holds both Orders 37 and 38, how much time should it use?  
A. Forty minutes more than No. 7's schedule time less amount of clearance required under Rule 87.
- Q. If Dispatcher annuls Order 37, how much time should Extra 80 East use?  
A. Thirty minutes more than No. 7's schedule time less amount of clearance required by Rule 87.

**SCHEDULE OF NO. 2**

A 8:30  
B 8:40  
C 8:55  
D 9:10  
E 9:27  
F 9:45  
G 9:55  
H 10:10

**ORDER 40**

No. 2 wait at

A until 9:05  
B until 9:13  
C until 9:20  
D until 9:30

**ORDER 41**

Eng 75 run extra H to A.

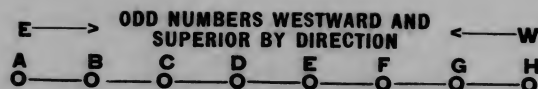
- Q. What time should Extra 75 West clear at D under Order 40?  
A. Not later than 9:25 (assuming the required clearance to be five minutes).
- Q. If Extra 75 West is unable to make D, what time should it clear at E, and why?  
A. Not later than 9:25 as the 9:30 wait at D applies at E the same as at D, it being greater than the schedule time at E.
- Q. What time should Extra 75 West clear No. 2 at F?  
A. Not later than 9:40.
- Q. Why may Extra 75 West use more time to make F than to make D or E?  
A. No. 2's schedule time at F (9:45) is greater than the wait at D. When the schedule time becomes greater than the wait, the schedule time applies.
- Q. When may the Dispatcher start a first section of No. 2 from A, B, C, D, E or F?  
A. A 9:05, B 9:13, C 9:20 and D and E 9:30, and F on time.
- Q. If an inferior train is running ahead of No. 2 on Order 40 may the inferior train leave D and go as far ahead of No. 2 as it can clear the 9:30 wait at D as required by Rule 86?  
A. Yes.
- Q. If the rules under which one is working permits No. 2 to be run late on Order 40, and the following order is received:

**ORDER 42**

No. 2 run 20 mins late  
on Order 40,

how would it effect Order 40?

- A. It would make all the times in Order 40 A to D inclusive twenty minutes greater than time indicated.
- Q. If on Extra 75 West holding both Orders 40 and 42, what time should Extra 75 West clear No. 2 at D, E, F or G?  
A. Not later than 9:45 at D, E or F and 9:50 at G.



FIRST CLASS NUMBERS 1 TO 10. SECOND CLASS NUMBERS 20 TO 30.  
THIRD CLASS NUMBERS 40 TO 50.

Q. If on an inferior train running ahead of No. 2 with Orders 40 and 42, may the inferior train leave D and run ahead of No. 2 clearing it on the wait at D plus the twenty minute run late on Order 40 as required by Rule 86?

A. Yes.

Q. When may Dispatcher start a first section of No. 2 from A, B, C, D, E, F or G after issuing Order 42?

A. A 9:25, B 9:33, C 9:40, D, E and F 9:50 and G on time.

Q. If Order 42 read "No. 2 run 20 mins late on Order 40 from C, could the 20 minutes be added to the time of Order 40 at A and B?

A. No, only at C and D.

Q. May the 20 minutes in Order 42 be added to No. 2's schedule time at any station or under any circumstances?

A. No.

#### ORDER 43

*No. 4 wait at C until 4:30  
PM for Extra 75 West.*

Q. May No. 4 leave C before 4:30 P. M.? If so, how?

A. If Extra 75 West arrives before 4:30 P. M. No. 4 may go, provided it is due to leave.

Q. If Extra 75 West is unable to make C and clear No. 4 five minutes, may it use the 4:30 P. M. to clear at D or any other station between C and H where 4:30 P. M. is later than the schedule time?

A. Yes, provided it clears the 4:30 P. M. not less than five minutes. If the schedule time at any station between C and H is greater than the 4:30 P. M. wait, would clear the schedule time.

Q. May any train other than Extra 75 West use this order?

A. No.

Q. Assuming the schedule time at D to be 4:25 P. M. and at E 4:35 P. M., what is the earliest time a first section of No. 4 could be started from Stations C, D or E?

A. Could not start a first section of No. 4 from C or D before 4:30 P. M. unless Extra 75 West had arrived, and from E 4:35 P. M. (on time).

#### ORDER 44

*No. 4 wait at D until  
6:30 PM.*

Q. May No. 4 leave D before 6:30 P. M.?

A. No.

Q. May any inferior train receiving this order use the time less the required clearance?

A. Yes.

Q. Assuming the schedule time at E to be 6:20 P. M. and at F 6:35 P. M., when may a first section of No. 4 be started from D, E or F?

A. D or E 6:30 P. M., F 6:35 P. M. (on time).

Q. If No. 4 receives an order to wait at D until 6:40 P. M. for Extra 75 West and on arrival at D receives an order to meet Extra 75 West at E, may No. 4 leave D before the 6:40 P. M. wait expires?

A. No, the wait must be annulled to permit No. 4 to leave D before 6:40 P. M.

#### FORM F—SECTIONS.

Q. When creating a section must it be given a copy of all train orders which restrict the schedule or particular section of the schedule of which it is to run?

A. Yes.

#### ORDER 45

*Eng 75 display signals and  
run as First 5 H to A.*

#### ORDER 46

*Eng 85 run as Second 5  
H to A.*

Q. How should Orders 45 and 46 be addressed?

A. Order 45 to C&E Eng 75 and Order 46 to C&E Eng 85 at H.

Q. Does Second 5 require a copy of Order 45?

A. No. Orders 45 and 46 are single order forms and are only to be used when Dispatcher does not know the engine number of the following section at the time the preceding section is created.

Q. If Engine 85 received a copy of Order 45 would it authorize them to run as the second section?

A. No.

Q. Must Engine 85 display signals under Order 46?

A. No.

Q. If it is desired to run a third section of No. 5, how should Order 46 read?

A. "Eng 85 display signals and run as Second 5 H to A".

#### ORDER 47

*No. 6 display signals A to F  
for Eng 80.*

*Second 6 display signals  
B to D for Eng 90.*

Q. How should Order 47 be addressed?

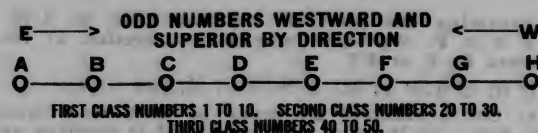
A. To C&E No. 6 and Eng 80 at A and to Engine 90 at B.

Q. Is it necessary to state which engine will run as No. 6 from F?

A. No.

Q. Should Engine 90 display signals B to D?

A. No.



Q. How should First 6 be governed on arrival at F and Second 6 on arrival at D?

A. Take down signals and comply with Rule 96.

Q. If B is not a register station, should Dispatcher protect any inferior train following Second 6 between A and B from leaving B ahead of Third 6?

A. Yes.

#### ORDER 48

*Engs 75, 85 and 95 run as  
First, Second and Third  
1 H to A.*

Q. How should this order be addressed?

A. To C&E Engs 75, 85 and 95 at H.

Q. Which engines display signals?

A. Engines 75 and 85.

Q. When authorizing sections to run to an intermediate point of a schedule under forms like those of Orders 45, 46 and 48, is it necessary to state which engines shall assume the schedule beyond such intermediate point, and how?

A. Yes, the orders should be issued as follows:

#### ORDER 49

*Eng 75 display signals and  
run as First 5 H to D  
and as No. 5 D to A.*

#### ORDER 50

*Engs 75, 85 and 95 run as  
First, Second and Third  
1 H to D. Engs 75 and 95  
run as First and Second  
1 D to A.*

Q. How should Engine 85 be governed on arrival at D as Second 1?

A. Clear the main track and take down signals.

Q. Would it be necessary in this case for crew of Engine 85 to comply with Rule 96?

A. Yes, the same as if they were to run as second section from D with no signals.

Q. Under Order 50 should Engine 95 display signals from D?

A. No.

#### ORDER 51

*Engs 70, 80 and 90 run as  
First, Second and Third  
8 A to H.*

#### ORDER 52

*Eng 100 display signals and  
run as Second 8 D to H.*

*Following sections change  
numbers accordingly.*

Q. How should Order 52 be addressed?

A. To C&E Second and Third 8 and Eng 100.

Q. When Eng 100 becomes the second section at D, how are Engs 80 and 90 governed?

A. Engine 80 becomes third section and Engine 90 becomes fourth section of No. 8.

Q. May a first section be added in this manner?

A. No, nothing is gained by it. Example 4, Form F should be used, annulling original signal order.

#### ORDER 53

*Engs 75, 85 and 95 run as  
First, Second and Third  
7 H to A.*

#### ORDER 54

*Eng 85 is withdrawn as Second  
7 at D. Following section  
change numbers accordingly.*

Q. How should order 54 be addressed?

A. To C&E Second and Third 7.

Q. How should Engines 85 and 95 be governed?

A. Engine 85 drops out at D and Engine 95 takes second place. (No signals).

Q. May the form used in Order 54 also be used to drop a last section?

A. No; Example 8, Form F, should be used.

#### ORDER 55

*Engs 70, 80 and 90 run as  
First, Second and Third  
2 A to H.*

#### ORDER 56

*Eng 76 instead of Eng 80  
display signals and run as  
Second 2 C to H.*

Q. How should Order 56 be addressed?

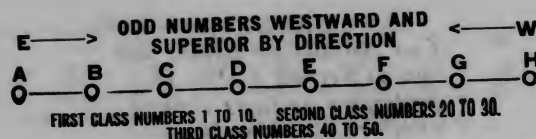
A. To C&E Second 2 and Eng 76.

Q. How should Engines 80 and 76 be governed?

A. Engine 80 drops out and Engine 76 runs as Second 2 displaying signals C to H. If it is desired to change engines on the last section the words "display signals and" should be omitted.

#### ORDER 57

*Engs 72, 74 and 84 run as  
First, Second and Third  
6 A to H.*



### ORDER 58

*Second 6 take down signals at E.*

Q. How should Order 58 be addressed?

A. To C&E Second and Third 6.

Q. How should Second 6 Eng 74 be governed?

A. Take down signals at E and, if E is a regular station, register in as Second 6 with green signals and register out as Second 6 with no signals, using two lines of register for the purpose, unless register provides space for registering signals in and signals out on same line.

Q. May the third section proceed beyond E?

A. No.

Q. If there is an operator at E and no register how should Second 6 be governed, provided the third section has not arrived?

A. Arrange with the operator in writing to notify all opposing trains that the second section took down signals and the third section has not arrived. If the third or following sections should display signals to E, operator should continue to notify opposing trains until last section arrives or schedule of No. 6 becomes more than 12 hours late at E.

Q. After the second section takes down signals at E, if operator at E should receive the annulment of Third 6 into E, would it then be necessary to notify opposing trains?

A. No.

Q. If no register or operator at E, but there is a switch-tender, how should Second 6 be governed?

A. Arrange with the switch-tender the same as if he were an operator, provided he is considered reliable.

Q. If no register, operator or switch-tender, how should Second 6 be governed?

A. Leave a flagman with the same written instructions as if he were an operator, unless some other provision is made.

Q. How should Second 6 register at next register station if E is a non-register station?

A. Signals carried to E.

Q. If an opposing inferior westward train is authorized by rule to register by ticket at the register station where Second 6 registers signals taken down at E, how should operator at register station be governed?

A. Stop such opposing westward train and notify it that Second 6 took down signals at E.

Q. In addition to the notice to all opposing trains of the same class and opposing inferior trains until the next register

is reached, should Second 6 also notify any opposing inferior train met beyond such register station if such opposing train is by rule permitted to register by ticket at the register station?

A. Yes.

### ORDER 59

*Engs 70, 72, 78 and 74 run as First, Second, Third and Fourth 2 A to H.*

### ORDER 60

*Engs 78 and 72 reverse positions as Second and Third 2 F to H.*

Q. How should Order 60 be addressed?

A. To C&E Second and Third 2.

Q. How will enginemen on engines 72 and 78 be governed?

A. Engine 78 will pass Engine 72 at F and run from F to H as Second, and Engine 72 will run F to H as Third 2, displaying signals as before, exchanging all unexpired orders.

Q. If the third and fourth sections were reversed, how should signals be arranged?

A. Engine 74 display signals as third and Engine 78 run as fourth without signals.

Q. If signals have been displayed by a second section A to H, and it is desired to annul the third section over the entire run or a part thereof, what form should be used?

A. Form K.

### ORDER 61

*Engs 94, 96 and 98 run as First, Second and Third 4 A to H.*

Q. If it is decided not to run Third 4 from A to H and Second 4 is at D, how should Dispatcher be governed?

A. Issue the following orders:

### ORDER 63

*Second 4 take down signals at D.*

### ORDER 64

*Third 4 of \_\_\_\_\_ is annulled A to D.*

Q. If conditions permit, is there not a better way?

A. Yes, permit Second 4 to display signals through to H and annul Third 4 A to H.

Q. If Second 4 has displayed signals or is permitted to display them through to H and Third 4 has reached D and it is desired to annul them D to H, how should order be issued if D is a non-register station?

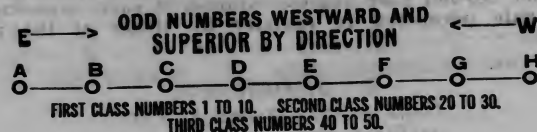
A.

### ORDER 65

*Third 4 of \_\_\_\_\_ has arrived at D and is annulled D to H.*



# FORM G—EXTRA TRAINS.



## ORDER 66

*Eng 76 run extra A to D.*

- Q. How should order 66 be addressed?  
A. To C&E Eng 76.  
Q. How should Extra 76 East regard regular trains?  
A. Clear their time as per rule.  
Q. How should Extra 76 East regard opposing extra trains?  
A. Should not consider opposing extra trains unless receive an order to do so.  
Q. When authorizing an extra to run must it be given orders respecting all opposing extras and work extras?  
A. Yes.  
Q. When practicable should an extra be given orders respecting opposing extras in the same order authorizing it to run extra?  
A. Yes.  
Q. If an extra is authorized to run over the limits of an opposing extra, or limits of a work extra, without provision being made for them to meet, who is responsible?  
A. Dispatcher.  
Q. On arrival at D on Order 66 what should Extra 76 East do?  
A. Head in at initial switch of siding as it has no authority to main track beyond that point at D.

## ORDER 67

*Eng 88 run extra A to C and meet Extra 75 West at C.*

## ORDER 68

*Eng 88 run extra C to H.*

- Q. In moving an extra to the end of its run against an opposing extra which form of order is preferable?  
A. Form C (right over) but Form A (meeting point) is permissible.  
Q. When is Order 67 fulfilled?  
A. On arrival of Extra 88 East at C.  
Q. After Eng 88 receives Order 68 how should it be governed with respect to Extra 75 West?  
A. Proceed on its run not considering Extra 75 West unless other orders are received regarding it.  
Q. When creating Extra 88 East under Order 68 if Extra 75 West holds authority to move between H and C, what is Dispatcher's duty?  
A. Provide a meeting point or other means for meeting.

## ORDER 69

*Eng 77 run extra H to D and return to H.*

- Q. What authority has Extra 77 to the main track between switches at D?  
A. No authority.  
Q. If an operator is on duty at D what should Extra 77 East obtain before leaving?  
A. A clearance card.  
Q. May Extra 77 turn at any station between H and D?  
A. No, they must make a direct run to D before using the order in the opposite direction. If emergency arises they may flag from a point not a train order office back to the first point of communication and obtain new orders.  
Q. If, in addition, the following orders are received:

## ORDER 70

*No. 10 run 50 mins late A to H.*

## ORDER 71

*No. 9 wait at F until 9:05 AM, E until 9:20 AM.*

## ORDER 72

*No. 21 of ——— is annulled H to A.*

## ORDER 73

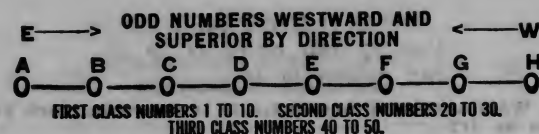
*Do not exceed 6 miles per hour between Mile Posts 10 and 15.*

- could Extra 77 use them in both direction?  
A. Yes.

## ORDER 74

*Eng 99 run extra H to C.*

- Q. If Extra 99 West is given Orders 70, 71, 72 and 73 and, on arrival at C, Engine 99 is given an order to run extra C to H, may it use Orders 70, 71, 72 and 73?  
A. Extra 99 East should use Orders 72 and 73, but not Orders 70 and 71, as Dispatcher may have reduced the time or annulled them after Extra 99 West arrived at C and before the engine was created Extra 99 East.  
Q. If Engine 99 was given an order to run extra H to A and, in addition, Orders 70, 71, 72 and 73, and at E the Dispatcher annuls its running order and gives it a new running order E to A in the same order with the annulment of original order, should it use Orders 70, 71, 72 and 73?  
A. Yes, as no time elapsed between the annulment of the original running order and the new one, therefore the time could not have been reduced or the time orders annulled without first annulling them to Extra 99 West.



#### ORDER 75

*Engs 80 and 90 run extra A  
to C and return to A.*

Q. What is there in Order 75 to prevent one of the extras returning from C before the other arrives?

A. Nothing, therefore they must be protected as against each other.

Q. State one way of doing it.

A. Add to Order 75 "Extras 80 and 90 East have right over Extras 80 and 90 West A to C".

#### ORDER 76

(not now standard)

*Eng 82 run extra leaving A  
on Sunday, July 4th, as follows  
with right over all trains.*

Leave A 7:10 AM

" B 7:20 AM

" C 7:30 AM

Arrive D 7:40 AM

Q. How should this order be addressed?

A. To C&E of all trains on the road and Eng 82. Also to all other trains authorized to run before order 76 is fulfilled.

Q. Is it necessary that all trains on the road receive this order before Engine 82 is permitted to use it?

A. Yes, the placing of the order in advance of the trains over which it is given right is not sufficient—they must have the order, unless temporarily protected until it is received.

Q. May this order be modified to read a particular train or trains over which it shall or shall not have right?

A. Yes.

Q. Does the 12 hour rule apply to Extra 82 East?

A. No, Order 76 is effective until fulfilled, superseded or annulled.

Q. How much should all opposing trains clear Extra 82 East?

A. No less than five minutes.

Q. How much must all trains in same direction clear it?

A. Five minutes or as much as local rules require.

Q. Is Extra 82 East superior to all trains under Order 76, and how?

A. Yes, by right.

Q. If an assigned yard at B how should Extra 82 East move through the yard?

A. The same as other extras. (Rule 93).

Q. May Form E be used in connection with Order 76?

A. Yes.

Q. If it is desired to move an opposing extra under the same form over same limits during existence of Order 76, what exception should be made?

A. The opposing extra should be given right over all trains except Extra 82 East.

Q. Does Order 76 relieve Extra 82 East from protecting as per Rule 99?

A. No.

#### ORDER 77

*Eng 79 run extra H to A and  
has right over Extra 80 East  
H to D and wait at E until  
9:30 AM for Extra 80 East.*

Q. On arrival at D may Extra 79 West proceed if Extra 80 East is not there?

A. Yes, as it is not restricted between D and A.

Q. If Extra 80 East is not at D but holds orders to run between A and D, how must the Dispatcher protect it?

A. Add to Order 77 "Extra 79 West take siding and not leave D unless Extra 80 East has arrived".

Q. How much is Extra 80 East required to clear Extra 79 West at E on the 9:30 A. M. wait?

A. Not less than five minutes.

Q. If on arrival of Extra 79 West at D the Dispatcher desires to advance it against Extra 80 East and makes a meet at C, would it be necessary to annul that part of order requiring Extra 79 West not to leave D unless Extra 80 East has arrived?

A. Yes.

Q. Eng 76 holding order to run extra A to D, and on arrival at D an order is received reading "Eng 76 run extra A to E instead of D", how should Eng. 76 be governed?

A. Remain at D until an order is issued to run extra D to E—the proper form. On arrival at D the order to run A to D is fulfilled and there is nothing to supersede.

Q. If order was received at some point between A and D to run extra A to E instead of D, would it be proper?

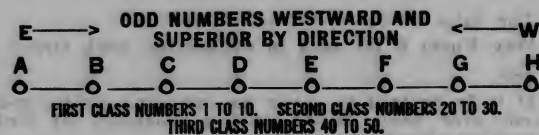
A. No, an order under Form G can not be superseded.

Q. If it is desired to move Eng 76 farther than D, how should it be done in order to keep them off the siding at D?

A. Annul order to run extra A to D at some point between A and D, and issue new running order.

Q. If No. 2 is given right over No. 1 A to F, and before No. 2 reaches F it is desired to move it farther for No. 1 and keep No. 2 off of the siding at F how should it be done?

A. Issue following order at some point between A and F. "No. 2 has right over No. 1 A to H instead of F."



### FORM H—WORK EXTRA.

#### ORDER 78

*Eng 151 works 6:30 AM to  
6:30 PM between B and C.*

Q. How should Work Extra 151 regard regular trains?

A. Clear as required by the rules and, if physically unable to do so, protect as per Rule 99.

Q. How should Work Extra 151 regard extra trains?

A. Whether standing or moving on main track, should protect itself in both directions.

Q. If two or more work extras are working within the same limits, and it is desired to suspend protection against extra trains and a work extra can not be reached must such work extra be excepted?

A. Yes.

Q. Still considering the preceding question; if the order suspending protection against extra trains in a specified direction be given a work extra, would it restrict such movements of work extras in the direction specified?

A. Yes.

#### ORDER 79

*Eng 155 works 6:10 AM to 2:30  
PM between F and G not  
protecting against eastward  
extra trains.*

Q. How should Work Extra 155 regard westward extra trains?

A. Protect against them.

Q. When extra trains are run over limits of a work extra must they be given a copy of the work extra's order?

A. Yes.

Q. If an eastward extra is run over the limits of Work Extra 155, how should it be governed?

A. It should protect against Work Extra 155 with the understanding that Work Extra 155 may be moving at speed against it and know nothing of it.

#### ORDER 80

*Eng 165 works 6:30 AM to 5:30  
PM between D and E not protecting  
against extra trains.*

#### ORDER 81

*Eng 78 run extra A to H.*

Q. How should Extra 78 East move over limits of Work Extra 165?

A. Under protection of a flag with the understanding that Work Extra 165 may be moving at speed against it and know nothing of it.

Q. If the view is obscure by dense fog, snow or sand storm, at night, through canyons or tunnels, or any condition obstructing the view would it be good judgment to proceed through the limits under flag?

A. No, Extra 78 East may crowd its flag, owing to obscure view, and Work Extra 165 approaching from the opposite direction at speed may cause a collision.

Q. If Extra 78 East can send a flagman ahead on a train preceding it would it be safe to flag?

A. Yes.

#### ORDER 82

*Work Extra 175 clears Extra  
90 East between F and G  
after 9:30 AM.*

Q. Whether required to protect against extras or not, must Work Extra 175 clear main track by 9:30 A. M.?

A. Yes, unless physically impossible, then it must protect as per Rule 99.

Q. What time may Extra 90 East pass into the limits of Work Extra 175?

A. 9:30 A. M.

Q. Should Extra 90 East flag into limits of Work Extra 175 if ready to go before 9:30 A. M.

A. No, the rule positively states that Extra 90 East must not enter the working limits before 9:30 A. M.

Q. Does this seem consistent?

A. Yes, as order to clear should be such that it would not be necessary for Extra 90 East to enter the limits before the time specified. If there is a slight difference more would be gained by waiting until the time is up than to flag.

#### ORDER 83

*Work Extra 185 protects against  
Extra 95 West between F and E  
after 10:15 AM.*

Q. What time may Extra 95 West enter the limits of Work Extra 185?

A. 10:15 A. M.

Q. From Order 83 is it evident that Work Extra 185 previously held an order not to protect against Extra 95 West?

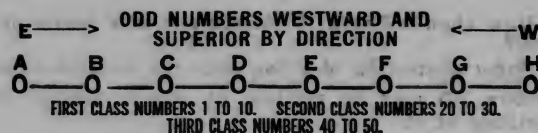
A. Yes.

Q. Should Extra 95 West flag into the limits of Work Extra 185 if ready to go before 10:15 A. M.?

A. No.

Q. Under Orders 82 and 83 how should extras run over the limits of work extras?

A. Run expecting to find the work extra clear of the main track or protecting as order may require.



**ORDER 84**  
*Work Extra 195 protects  
against No. 25 (or second  
and third class trains)  
between G and H.*

Q. Does Order 84 authorize Work Extra 195 to work on the time of No. 25 or second and third class trains, and how?

A. Yes, under flag.

Q. How should No. 25 or second and third class trains move over the limits of Work Extra 195?

A. Run expecting to be flagged at any time and be able to stop before passing flagman.

Q. Should Dispatcher give work extras orders to protect against unimportant regular trains when creating a work extra?

A. Yes.

Q. If the conditions warrant may the Dispatcher give a work extra an order to protect against a first class train?

A. Yes.

**ORDER 85**  
*Work Extra 191 has right over  
all trains between C and D  
8:30 PM to 2:30 AM.*

Q. Does Order 85 give Work Extra 191 exclusive right between C and D?

A. Yes.

Q. Is it necessary for Work Extra 191 to protect in either direction at any time?

A. No.

Q. Are all trains prohibited from going into limits of Work Extra 191?

A. Yes.

Q. If waiting at either C or D for Work Extra 191 and it arrives before 2:30 A. M., may the waiting train proceed?

A. No.

Q. Would it be proper for Dispatcher to help a train into the limits of Work Extra 191 by making a meet, placing the order between the work extra and meeting point?

A. No, track may be impassable at any point within the limits of Work Extra 191.

Q. In an extreme emergency case would it be good judgment to move into limits of Work Extra 191 under protection of flag with the understanding that track may be found impassable or blocked with cars at any point, and work extra working unprotected by flag?

A. Yes, if conditions warrant such a move and view of track, weather and other conditions are favorable.

Q. Are work extras required to give way to other trains as promptly as practicable, and should they take the siding?

A. Yes, if practicable to do so.

Q. Should working limits be as short as practicable; to be changed as progress of the work may require?

A. Yes.

Q. If on Work Extra 194 protecting against Extra 76 East between G and H, and No. 4 with Engine 76 passes, would it relieve Work Extra 194 from further protection?

A. No, the order must be respected until Extra 76 East passes. No. 4 may have changed engines with Extra 76 East and No. 4's engine is on the extra running under authority of the order, or Engine 76 may be used on a westward train and then run east extra over the limits.

**THE FOLLOWING ORDERS ARE SOMETIMES USED AND  
ARE NECESSARY IN HANDLING WORK EXTRAS.**

**ORDER 86**  
*Work Extra 178 protects  
against regular trains except  
No. 7 between C and D.*

Q. How should Work Extra 178 regard No. 7?

A. Clear No. 7's time as per rules. The order only authorizes Work Extra 178 to use main track under protection against all regular trains except No. 7.

**ORDER 87**  
*Eng 192 works 7:10 AM to 6:30  
PM between A and B, protects  
against Extra 79 West after  
10:30 AM, not protecting  
against other extra trains.*

Q. How should Work Extra 192 be governed under Order 87?

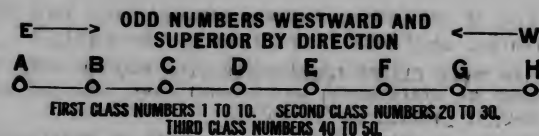
A. Protect after 10:30 A. M. against Extra 79 West. Protection required under the rules is suspended by this order against other extra trains and against Extra 79 West prior to 10:30 A. M.

**ORDER 88**  
*Eng 181 works 6:30 AM to 7:30  
PM between F and G.  
Westward extra trains wait at G  
until 9:30 AM.  
Eastward extra trains wait at F  
until 10:15 AM.*

Q. How should Work Extra 181 be governed under Order 88?

A. Protect against westward extra trains after 9:30 A. M. and against eastward extra trains after 10:15 A. M. The order suspends protection as required by the rules until the times specified.





#### ORDER 89

*Eng 179 works 6:30 AM to 5:30 PM between B and D, clears Extra 76 East, protects against Extra 85 West and Extra 88 East, not protecting against other extra trains.*

Q. How should Work Extra 179 be governed under Order 89?

A. Keep clear of Extra 76 East, then protect against Extra 85 West and Extra 88 East until they pass, then work without protection against other extra trains.

#### ORDER 90

*Eng 189 works 6:15 AM to 6:15 PM between A and B, protects against Extra 74 East and Extra 76 East after 10:30 AM and Extra 78 East after 1:30 PM, not protecting against other eastward extra trains until 3:30 PM. Westward extra trains wait at B until 2:10 PM.*

Q. Under Order 90 how should Work Extra 189 be governed?

A. Protect against Extra 74 East and Extra 76 East after 10:30 A. M. and Extra 78 East after 1:30 P. M. not protecting against other eastward extra trains until 3:30 P. M., protecting against westward extra trains after 2:10 P. M.

#### ORDER 91

*Eng 165 works 7:10 AM to 6:30 PM between C and F, not protecting against extra trains until 10:30 AM.*

Q. How should Work Extra 165 be governed?

A. Work without protection against extra trains in either direction until 10:30 A. M. unless other orders to protect before 10:30 A. M. are received. Order 91 suspends the rule requiring protection against extra trains until 10:30 A. M.

Q. If on a work extra, whether required to protect or not, and an order is received creating an extra under old Example 3, Form E, giving it right over all trains or so worded as to include the work extra, how should work extra be governed?

A. Keep clear of the extra's time as shown in the order.

#### ORDER 92

*Eng 175 works 7:30 AM to 6:30 PM between D and F, not protecting against extra trains.*

#### ORDER 93

*Work Extra 175 protects against Extra 99 between D and F after 2:10 PM.*

Q. Under Orders 92 and 93 which way should Work Extra 175 protect at 2:10 P. M.?

A. Both east and west.

Q. If possible to communicate with Dispatcher would you insist on an order stating the direction of Extra 99?

A. Yes.

Q. If Order 93 read "Protect against Extra 99 East and West after 2:10 P. M." how should Work Extra 175 be governed?

A. Protect both east and west after 2:10 P. M.

Q. Would it indicate that Extra 99 is going to move east before it moves west?

A. No, it may move west first.

Q. May a work extra be given an order to report for orders at a specified time?

A. Yes.

Q. If after reporting for orders as directed, and there are none, what should be obtained before leaving?

A. An order stating that there are no orders, or annulment of order to report.

Q. May the time or station limits of a work extra be extended?

A. No, a new work order is necessary.

#### FORM J—HOLDING ORDER.

##### ORDER 95

*Opr B: Hold No. 10.*

##### ORDER 96

*Opr C: Hold westward trains.*

##### ORDER 97

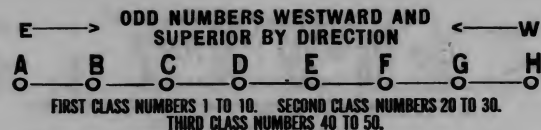
*Opr H: Hold all trains.*

Q. How should operator at B handle Order 95?

A. Hold No. 10. On its arrival deliver copies of the order complete to the operator, to conductor and engineman without a clearance in case a clearance is required by the rules with all orders.

Q. After No. 10 receives Order 95 may it proceed if given a clearance or, if no clearance is required, may it proceed if given a proceed train order signal?

A. No, it must obtain an order addressed and completed to the operator authorizing No. 10 to go or one annulling Order 95.



Q. How should Order 96 be handled?

A. The same as Order 95, only applying it to all westward trains instead of to No. 10.

Q. If Dispatcher desires to let No. 5 go and hold other westward trains, how should it be done?

A. By giving the following order to the operator at C: "No. 5 may go".

Q. If it is desired to permit all westward trains to move, how should it be done?

A. By giving the following order to the operator at C: "Order 96 is annulled".

Q. How should the operator be then governed?

A. Deliver completed copies of annulment of the hold order, or order to go, to conductors and enginemen of all trains permitted to move, together with all other orders addressed to them. If a clearance is required with all orders, indicate thereon the numbers of all orders delivered, including the hold order and the release of the hold order.

Note: Standard Clearance only require total number of orders delivered.

Q. May Dispatcher move an inferior train against a superior train by holding the superior train with either Orders 95, 96 or 97?

A. No.

Q. To what stations should Order 97 be issued?

A. Generally to operator at initial stations. It is not likely that it will be necessary to have an operator at an intermediate station hold trains in both directions.

Q. Name some of the conditions which might require the use of Form J.

A. Cases of derailment, washout, land slide, blizzard or other conditions making the safe passage of trains doubtful.

#### FORM K—ANNULLING A SCHEDULE OR A SECTION.

##### ORDER 98

*No. 6 due to leave A Dec. 25th is annulled A to H.*

Q. May the schedule of No. 6 of Dec. 25th be restored or used by annulling Order 98?

A. No.

Q. What is the meaning of Order 98?

A. The Superintendent or official authorized to issue orders notifies all trains that no train will be permitted to move under authority of No. 6's schedule due to leave A Dec. 25th, and those so notified may move the same as if there was no No. 6 on the time-table.

Q. How does Order 98 effect the 12 hour existence of No. 6's schedule of Dec. 25th?

A. It does not effect the 12 hour existence, but prevents a train from using the schedule. The fact that Order 98 must be issued and in possession of inferior trains before they are permitted to move regardless of the schedule of No. 6 of Dec. 25th, is sufficient evidence of the 12 hour existence.

##### ORDER 99

*No. 4 due to leave A July 4 is annulled D to H.*

Q. How should opposing inferior westward trains be governed under Order 99?

A. Run H to D regardless of No. 4's schedule of July 4th and hold main track at D. If a register at D check against No. 4. If none, and No. 4 not there, obtain an order from Dispatcher stating that No. 4's schedule has been fulfilled into D or wait for No. 4 until it arrives or schedule becomes more than 12 hours late.

Q. Where does No. 4 belong at D?

A. On the siding as it has no authority to main track.

Q. If Dispatcher adds to Order 99 "This order to No. 4 at D" how should an inferior westward train be governed on arrival at D?

A. Head in at first switch of siding.

Q. If siding at D is between No. 4 and the train order office, how should Dispatcher, operator and inferior westward trains be governed?

A. Dispatcher should avoid, if possible, placing Order 99 at D for No. 4 and, if it is done, the operator should stop No. 4 before it passes the east switch of siding. Westward inferior trains must move between the train order signal and the east switch at D prepared to prevent collision with No. 4 and, if conditions warrant, run under protection between train order signal at D and the east switch, which would necessitate sending a flagman a sufficient distance beyond east switch to protect the westward train while heading in for No. 4.

##### ORDER 100

*Second 2 due to leave A (or D) Jan. 1st is annulled D to H.*

Q. How should Extra 79 West with Order 100 regard the schedule of No. 2?

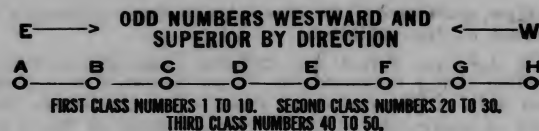
A. Clear the schedule of No. 2 and meet the first section, then proceed to D, hold main track and meet the second and all following sections, if any. Extra 79 West, Second 2, Dispatcher and operator should be governed at D the same as under Order 99.

Q. Does Order 100 indicate that there was or is a Second 2 A to D?

A. No, Dispatcher may have created a second section of No. 2 D to H and afterward annulled it.

Q. May Second 2 of Jan. 1st be restored between D and H?

A. No.



### FORM L—ANNULING AN ORDER.

#### ORDER 101

*No. 5 meet No. 4 at E.*

#### ORDER 102

*Order No. 101 is annulled.*

**Q.** Must No. 4 receive Order 102 before it is completed to No. 5?

**A.** Yes, the placing of the order at B, C or D for No. 4 is not sufficient, as No. 4 may not reach the station where the order is issued for it before No. 5 passes. If not, it no doubt would result in a collision. It would be a lap order.

**Q.** If Order 101 has not been delivered to No. 4 may it be annulled to the operator?

**A.** Yes.

**Q.** May Order 101 be re-issued under its original number?

**A.** No.

**Q.** May the meet between Nos. 4 and 5 at E again be made by issuing a new order under a new number?

**A.** Yes.

**Q.** If Order 102 is annulled would Order 101 then be in effect?

**A.** No.

**Q.** If there are two outstanding orders of the same number, but of different dates, should Dispatcher designate the date when annulling order of that number?

**A.** Yes.

### FORM M—ANNULING PART OF AN ORDER.

#### ORDER 103

*No. 2 meet No. 5 at C and  
No. 7 at D.*

#### ORDER 104

*That part of Order No. 103  
reading, No. 2 meet No. 7  
at D is annulled.*

**Q.** Does Order 104 effect the meet between No. 2 and No. 5 at C?

**A.** No, it only annuls the portion mentioned.

**Q.** By annulling Order 104 would the meet between No. 2 and No. 7 at D under Order 103 again become effective?

**A.** No.

**Q.** May a meet again be made between No. 2 and No. 7 at D by issuing a new order?

**A.** Yes.

### FORM P—SUPERSEDING AN ORDER OR A PART OF AN ORDER.

**Q.** How should an order or a part of an order be superseded?

**A.** By adding to prescribed form the words "instead of".

**Q.** Is there any other way of superseding an order?

**A.** No.

#### ORDER 105

*No. 3 meet No. 4 at E  
instead of D.*

#### ORDER 106

*No. 8 has right over No. 7  
C to F instead of E.*

#### ORDER 107

*No. 5 display signals for  
Eng 75 H to B instead of C.*

#### ORDER 108

*No. 9 pass No. 5 at F instead  
of E.*

**Q.** If Order 105 is annulled is there a meet existing between No. 3 and No. 4?

**A.** No.

**Q.** If Order 106 is annulled has No. 8 right over No. 7 C to E?

**A.** No.

**Q.** If Order 107 is annulled should No. 5 display signals to C?

**A.** No.

**Q.** If Order 108 is annulled should No. 9 pass No. 5 at E?

**A.** No, not on Order 108, but may pass under Rule 85.

**Q.** After an order has been superseded may it again be re-issued under its original number?

**A.** No.

**Q.** After an order or part of the order has been superseded may that order or part of an order be again re-issued as a new order under a new number?

**A.** Yes.

**Q.** Would it be proper to issue an order stating "No. 6 meet No. 5 at D instead of having right over No. 5 to E".

**A.** No.

**Q.** Is it proper or necessary to supersede a time order?

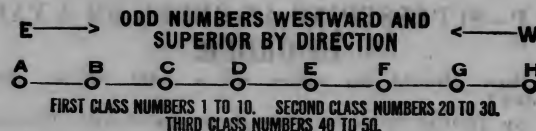
**A.** No, if the time is made greater a supersedure would not be necessary, and if the time is to be reduced the preceding time order should be annulled.

**Q.** If a train is directed by train order to take siding for another train to what does it apply?

**A.** To the point named in the order and does not apply to the superseding order unless so specified.

**Q.** If a train is directed by train order to hold the main track does the same principle apply?

**A.** Yes.



Q. If running on a schedule or as an extra and engine is given an order at an intermediate station on the run to work extra or return to some point, after returning to the point where the schedule or original order to run extra had been fulfilled may the schedule or order to run extra be resumed?

A. Yes, if it has not been annulled.

Q. When practicable is it best to annul an order to run extra or work extra before giving a new order making a different move?

A. Yes.

Q. If after returning to point where schedule or order is to be resumed should Dispatcher be consulted before doing so?

A. Yes, if possible.

Q. If an eastward regular train is taken off its schedule or an eastward extra is held up by order at D and is given an order to work temporarily between C and E may it resume its schedule or order to run extra from C or E?

A. No, must resume it from D.

Q. If an engine is given order to run extra and afterward given a work order that covers unused portion of order to run extra should it be considered two trains by the Dispatcher?

A. Yes.

Q. When an engine is unknown should it be so stated in order, if rules require that engine numbers be designated?

A. No, the absence of the engine number is a self evident fact that it is unknown; so stating in an order is no additional information.

Q. When engines are coupled should both engines be designated in the order?

A. No, it only tends to complicate the order.

Q. If No. 1 receives an order to meet No. 2 at D and afterwards receives an order to meet First No. 2 at E instead of D, how should No. 1 regard second or following sections of No. 2?

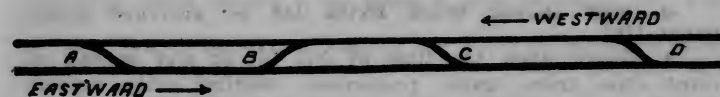
A. Go to D for second and following sections.

Q. If No. 9 receives an order to meet No. 10 at F and on arrival at F finds that First No. 10 has arrived, and is then given an order to meet Second No. 10 at E instead of F, and on arrival at E Second No. 10 is met with green signals, how should No. 9 be governed?

A. Remain at E and ask for instructions.

Note: Dispatcher would in this case have only created an irregular condition for which there would be no excuse. This condition is more of a myth than a reality and is only given space to quiet those whose only idea is to start an argument.

## QUESTIONS AND ANSWERS—DOUBLE TRACK ORDERS.



### D-FORM H.

Q. On double track which way should trains keep unless otherwise directed?

A. To the ———. (Generally to the right).

#### ORDER 109

*Eng 155 works on westward  
track 6:15 AM to 6:15 PM  
between C and A.*

Q. Is Work Extra 155 required to clear regular trains?

A. Yes.

Q. How is Work Extra 155 to regard extras?

A. Protect itself between C and A (whether standing or moving) against extras that may be moving with the current of traffic.

Q. May Order 109 be modified by adding "not protecting against extra trains".

A. Yes.

Q. If "not protecting against extra trains" is added to Order 109 may Work Extra 155 move against the current of traffic on the westward track between A and C clearing regular trains?

A. Yes.

Q. If extras are authorized by rule to run on double track without running orders would it be good judgment on part of Dispatcher to give a work extra an order to work on double track, not protecting against extra trains or "westward extra trains wait at C until ———"?

A. No, unless he is in position to control the movement of each and every extra so authorized.

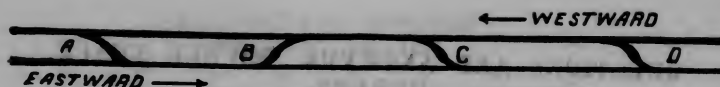
Q. If Work Extra 155 is authorized to work on both tracks between C and E how should it be governed?

A. Should be governed on the eastward track in the same manner as is required on the westward track, moving always with the current of traffic unless an order is received permitting a movement against the current of traffic.

#### ORDER 110

*Work Extra 155 protects  
against No. 25 (or Second  
and Third Class Trains)  
between A and D.*





Q. How should Work Extra 155 be governed under Order 110?

A. Work upon the time of No. 25, or any second or third class train, under protection, clearing other regular trains and protecting against extra trains moving with the current of traffic on track used.

Q. How should No. 25 and second and third class trains be governed under Order 110?

A. Run at such speed that they will be able to stop before passing the flagman of Work Extra 155.

Q. When a work extra is given right over all trains on one or both tracks may it move in either direction the same as when given right over all trains on single track?

A. Yes, it has exclusive right to the track.

#### ORDER 111

*Eng 175 works on eastward track 7:30 AM to 5:30 PM between C and D. Eastward extras wait at C until 10:30 AM.*

Q. May Work Extra 175 move against the current of traffic under Order 111 until 10:30 A. M. clearing regular trains?

A. Yes.

#### D-FORM R—PROVIDING FOR A MOVEMENT AGAINST THE CURRENT OF TRAFFIC.

##### ORDER 112

*No. 2 has right over opposing trains on westward track B to C.*

Q. What is necessary before Dispatcher can authorize a movement against the current of traffic?

A. Clear the track on which such movement is to be made of opposing trains.

Q. Does Order 112 prohibit No. 2 from using eastward track between B and C?

A. Yes.

Q. Must Dispatcher place Order 112 moving No. 2 against current of traffic where all westward trains will receive it before leaving C?

A. Yes.

Q. When may an opposing westward train leave C?

A. After No. 2 arrives.

Q. Does a movement against the current of traffic indicate that the other track is impassible?

A. No.

Q. May the order state the number of the track instead of eastward or westward track?

A. Yes.

Q. If an inferior eastward train is between B and C on eastward track should it be given a copy of Order 112, and why?

A. Yes, to prevent it waiting for No. 2 to pass if it falls back on No. 2's time.

Q. If an inferior eastward train following No. 2 arrives at B before No. 2 returns to eastward track at C, should it be given a copy of Order 112? If so, why?

A. Yes, to prevent the inferior eastward train from leaving C ahead of No. 2 should it reach C before No. 2 returns to eastward track.

Q. If no register at C how should the inferior train be governed on arrival at C?

A. If no means of communicating with Dispatcher at C, watch the westward track from B to C for No. 2. If the tracks separate, making it impossible, assume No. 2 has not left C and leave a flagman and proceed ahead of No. 2 to a point of communication.

Q. When a regular train is moved against the current of traffic, does its schedule time apply to the track used?

A. No.

Q. If Order 112 read "After the arrival of No. 1 at B, No. 2 has right over opposing trains on westward track B to C" how should No. 2 be governed?

A. No. 2 must not leave B until after the arrival of No. 1, then proceed in the same manner as under Order 112.

Q. If there is an assigned yard within the territory where a train is to be moved against the current of traffic, should all yard engine crews be notified before move is authorized, and how?

A. Yes, notify Yardmaster and get assurance from him that all crews have been notified. If rules require, address order to Yardmaster and handle in usual manner.

#### D-FORM S—PROVIDING FOR USE OF A SECTION OF DOUBLE TRACK AS SINGLE TRACK.

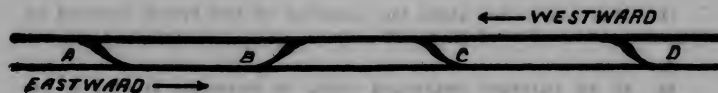
##### ORDER 113

*No. 1 (or westward) track will be used as single track between B and C.*

Q. Before Order 113 is issued must the track between B and C be clear of trains?

A. Yes.

Q. As superiority by direction does not apply on double track, when a section of double track is singled must it be understood in which direction trains are to be superior by direction as between opposing trains of the same class, and how should it be done?



A. In time-tables where there are schedules applying to double track there should be a special rule stating direction in which trains are superior by direction in the event that a section of double track is to be operated as single track.

Q. What kind of rules apply between B and C under Order 113?

A. Single track rules.

Q. Before passing from double to single track at B or C must it be known that all trains that are superior have arrived and left?

A. Yes.

Q. If registers are not provided how may this information be obtained?

A. From the Dispatcher at last train order office, then check all trains on opposite track between register and point where track is singled. If there are means of communicating with Dispatcher at point where track is singled a train order check of trains may be obtained.

Q. Must trains be operated between B and C as long as Order 113 is in effect the same as if the track had always been single track, inferior trains keeping clear of superior trains?

A. Yes.

Q. Under Order 113 do the schedules of the eastward track apply to the westward track between B and C?

A. Yes, provided both tracks pass through the same station.

Q. If Engine 75 is given an order to run extra D to A and return to D, and also a copy of Order 113, how must it regard the track between B and C?

A. As single track both ways.

Q. If Engine 85 is given an order to run extra D to A and also a copy of Order 113, when is Order 113 fulfilled by Extra 85 West?

A. On its arrival at B.

Q. If on arrival at A it is given an order to run extra A to D, and is not given a copy of Order 113, how should it be governed between B and C?

A. Use the eastward track. The tracks between B and C should then be considered normal.

#### ORDER 114

No. 1 (or westward track)  
will be used as single track  
between B and C from 10:30  
AM to 1:30 PM.

Q. Do the rules apply the same under Order 114 between 10:30 A. M. and 1:30 P. M. as they apply under Order 113 as long as it is in effect?

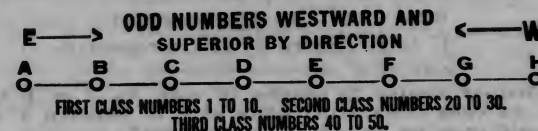
A. Yes.

Q. After 1:30 P. M., the expiration of the time limit singling the westward track, how should eastward trains be governed?

A. Must be clear of westward track or protected in both directions.

Q. If there is an assigned yard within the territory where a section of double track is to be used as single track, should all yard engine crews be notified before this is authorized, and how?

A. Yes, notify Yardmaster and get assurance from him that all crews have been notified. If your rules require, address order to the Yardmaster and handle in usual manner.



Note: Examination on Orders 115, 116 and 117 only applies where trains are not permitted to meet extras by checking them on the register.

#### D—REGISTER STATION

##### ORDER 115

No. 26 meet Extra 75 West  
at D.

##### ORDER 116

Extra 75 West has right  
over No. 26 H to D.

##### ORDER 117

No. 26 wait at D until  
9:30 AM for Extra 75 West.

Q. If on No. 26 holding either Orders 115 or 116 and an Extra 75 appears on the register, but is not in sight, are you permitted to proceed?

A. No.

Q. What is necessary before No. 26 may proceed?

A. Obtain an order annulling Orders 115 or 116, or superseding Order 115 or an order as follows:

##### ORDER 118

Extra 75 West has arrived  
at D on Order No. 115  
(or 116).

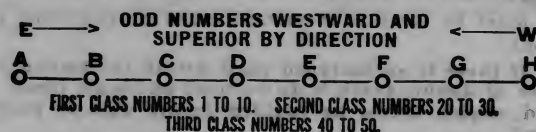
Q. If No. 26 held Order 117 and was ready to leave at 9:10 A. M. could it do so?

A. Only in case Extra 75 West has arrived and can be checked personally (must see their markers) or Order 117 is annulled, or an order in form of Order 118 is received.

Q. May a regular train be met on the register without seeing them?

A. Yes. If register indicates a schedule has been fulfilled it cannot be fulfilled again on that date.

# MISCELLANEOUS ORDERS THAT ARE SOME TIMES NECESSARY OWING TO LOCAL CONDITIONS.



## ORDER 119

To Engr Eng 75 at F.  
After arrival of Extra 85  
west at C Eng 75 run extra  
C to F. Extra 85 West reported  
out of F at \_\_\_\_\_.

Q. Helper Engine 75 couples in with No. 1 at F to help it to C, no open train order office at C or between F and C, how should crew on Engine 75 be governed?

A. Note whether No. 1 passes Extra 85 West at F or between F and C and, if it does, remain at C for its arrival. If any doubt, flag to first point of communication and report for instructions.

## ORDER 120

After helping Extra 88 East  
A to C Eng 75 run extra C  
to A clearing Extra 90 East  
reported out of A at \_\_\_\_\_.

Q. Assuming C is not a point of communication, what must Extra 75 West know before leaving C?

A. That Extra 90 East left A ahead of Extra 88 East and that it was not passed between A and C.

## ORDER 121

Engs 75 and 85 run as First  
and Second 1 H to A.

## ORDER 122

Order 121 is annulled. Engs  
75 and 85 run as First and  
Second 1 H to D, and  
Engs 65, 75 and 85 run as  
First, Second and Third  
1 D to A.

Q. Assuming that Second 1 runs between D and A displaying signals for third section, before Second 1 arrives at D, and it is desired to help No. 2 A to E under Form C against following section, how should it be done?

A.

## ORDER 123

No. 2 has right over Third  
1 A to D and right over  
Second 1 D to E. Second  
1 into D will be Third 1 out.

Q. If the following is added to an order

*This order annulled at  
10:15 P.M.*

does it annul all movements in the order, and if an order to run extra is included in the order, must train be clear of main track before 10:15 P. M.?

A. Yes.

Q. Under what circumstances is such an order necessary?

A. When an extra is run to point where report of arrival can not be received, and it may become necessary to move other extras in opposite direction after 10:15 P. M. Should only be used in extreme cases.

Q. If an order is sent to a train at a point not a train order office, or to one that is closed, in care of Conductor of No. 1, and after it has been delivered to Conductor of No. 1, Dispatcher desires to annul it, how should it be done?

A. Address annulment to Conductor No. 1 in whose care order is sent, and Conductor No. 1 must then treat the order as if it had not been received. Under no circumstances should the order and annulment of it be delivered to the train addressed.

Q. After making a meet between No. 1 and No. 2 at F, would it be proper to then give No. 2 right over No. 1 D to G for the purpose of putting No. 1 on the siding at F, or for any other reason?

A. No, it would be irregular and not good dispatching.

## THREE OR MORE TRACKS.

(Rules F-271 to F-276 inclusive).

Q. How should main tracks be designated?

A. By numerals.

Q. How should their use be designated?

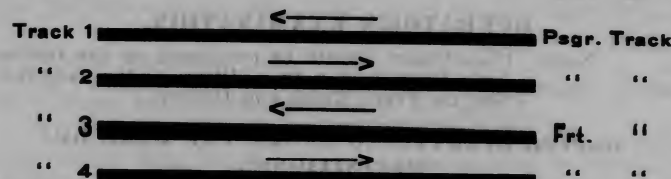
A. By special instructions.

Q. On portions of the road so specified on the time-table, may trains run with the current of traffic by block signals?

A. Yes.

Q. Will such indications supersede time-table superiority?

A. Yes.



Q. How should trains running at night with the current of traffic on Nos. 1 and 2 tracks display markers?

A. Two red lights to the rear.

Q. How should trains running at night with current of traffic on No. 3 track display markers?

A. A green (or yellow) light to the rear on the side next to No. 1 track and a red light on opposite side.

Q. How should trains running at night with the current of traffic on No. 4 track display markers?

A. A green (or yellow) light to the rear on side next to No. 2 track and a red light on the opposite side.

Q. How should a train using any track at night against current of traffic display markers?

A. Two green (or yellow) lights at the rear, one on either side, with a red light on the platform or cupola.

Q. How should a train display markers at night when on a siding?

A. Two green (or yellow) lights to the rear.

Note: Same principle applies on Railroads where relative position of passenger and freight tracks differ.

Q. When a flagman for No. 1 track may return, what whistle signal should be given?

A. Five long sounds.

Q. When may flagman for No. 2 track return?

A. Four long sounds.

Q. When may flagman for No. 3 track return?

A. Five long and one short sounds.

Q. When may flagman for No. 4 track return?

A. Four long and one short sounds.

Q. When may flagman for No. 5 track return?

A. One short and five long sounds.

Q. When may flagman for No. 6 track return?

A. One short and four long sounds.

Q. When may flagman for No. 7 track return?

A. One short, five long and one short sounds.

Q. When may flagman for No. 8 track return?

A. One short, four long and one short sounds.

Q. Except as effected by additional rules quoted for three or more tracks, are all Block Signal Rules and Train Orders for Double Track in force?

A. Yes.

### OPERATOR'S EXAMINATION.

Note: Dispatchers should be examined on the Operator's Examination in addition to the examination on Train Rules and Orders.

#### DEFINE EVERYTHING UNDER THE HEAD OF "DEFINITIONS".

Q. Is it possible for an operator to always know which train is superior?

A. No, as he does not always know what orders the trains hold.

Q. Are operators required to have a standard watch?

A. (Depends on requirement of Railroad where employed).

Q. State when and how standard time is received.

A. (As per Rules 1, 2 and 3).

Q. What does full-faced type on a time-table indicate?

A. Meeting or passing points.

Q. Are operators required to have a current time-table and understand all special rules therein before it takes effect?

A. Yes (Ask questions on the special rules).

Q. Are operators required to provide themselves with proper signals and keep them in good order ready for immediate use?

A. Yes.

Q. What flags and hand lamps should a train order office be equipped with?

A. One red, one green and one combination green and white flag, at least one white, one red and one green light.

Q. When should day signals be displayed?

A. From sunrise to sunset.

Q. When should night signals be displayed between sunrise and sunset?

A. When from weather or other conditions day signals can not be plainly seen.

Q. When should night signals be displayed?

A. From sunset to sunrise.

State the meaning of the color signals under Rule 10 and positions of semaphores.

State the meaning of hand, flag and lamp signals. (Rule 12).

State the meaning of audible signals. (Rule 14).

State the meaning of torpedo signals. (Rule 15).

Q. When an engine is running backward at night what signals must be displayed on rear of tender?

A. A white light.

Q. What signals must be displayed as markers to indicate the rear of a train?

A. By day, green (or yellow) flags or marker lamps (not lighted) on each side of rear of train.

By night, green (or yellow) lights to the front and sides and red lights to the rear; except when train is clear of main track, when green (or yellow) lights must be displayed to front, side and rear.

Q. When a train is moving against the current of traffic at night how should markers be displayed?

A. Green (or yellow) lights to front and side, a green (or yellow) light to the rear on the side next to the main track on which the current of traffic is in the direction the train is moving, and a red light to the rear on opposite side.

Note: See display of markers on more than two tracks. Page 28.



Q. If a train passes with an engine behind the caboose or rear of last passenger car, and the markers are on the rear car and no markers on the engine, what would it indicate?

A. Engine of a following train temporarily assisting the train ahead.

Q. If no markers on rear car but the engine behind the last car is displaying markers, what would it indicate?

A. One train.

Q. If markers are displayed on rear of caboose or last car, and also on an engine or train coupled to the rear, what would it indicate?

A. Two trains coupled.

Q. If a train passes with an engine in the middle of it displaying markers, and markers displayed on rear car, what would it indicate?

A. An improper display of markers, and same should be reported.

Q. Would you report a train as arrived or by if it did not display markers?

A. No.

Q. If you were not positive of the train number or engine of an extra, how would you be governed?

A. Describe the train to the Dispatcher, but would not send the regular report.

Q. Do you understand when you report a train as arrived or by that the Dispatcher is then authorized to annul orders that may effect such train?

A. Yes.

Q. In reporting trains at a register station should operators always state the kind of signals displayed by regular trains, as "Green signals" or "No signals," and why?

A. Yes, in order that Dispatcher may authorize necessary correction of the register if improper signals have been registered.

Q. Should an operator look for signals on all trains except at register stations where all trains register?

A. Yes.

Q. Should operator note signals displayed as designated on register?

A. Yes.

Q. How are following sections indicated?

A. By display of two green flags by day and in addition two green lights by night in the place provided for the purpose on the engine.

Q. How many sections display signals?

A. All except the last.

Q. What signals denote an extra train?

A. Two white flags and, in addition, two white lights by night, in places provided for that purpose on front of the engine.

Q. Would the display of one flag or light as prescribed in Rules 19, 20 and 21 indicate the same as two?

A. Yes.

Q. When two or more engines are coupled on head end of train how should signals be displayed?

A. All engines must display signals.

Q. How should an imperfectly displayed signal, or absence of a signal at a place where a signal is usually shown be regarded?

A. As the most restrictive indication that can be given by that signal.

Q. What signal must be used to stop a train at a station designated on its schedule by the letter "F"?

A. A combination green and white flag by day and by night a green light and a white light placed in line at right angles with the track, and on the same side.

Q. If there is a conditional flag stop designated by special rule or, if necessary to stop a train at a point not a flag station on its schedule, what signal should be used?

A. A red signal.

Q. If any obstruction or defect in track is found or reported which may interfere with the safe passage of trains, how should you be governed?

A. Notify the Dispatcher at once, display the necessary signals on both sides if conditions warrant, and then notify the sectionmen.

Q. Are messages regarding broken rails or defects in track more important than train orders?

A. Yes, and should take preference on the wire.

Q. In which direction are trains superior by direction as between opposing trains of the same class?

A. See current time-table.

Q. How long are time-table schedules in effect at each station?

A. For 12 hours after their time unless fulfilled.

Q. When do regular trains lose both right and schedule at any station?

A. When more than 12 hours behind their leaving time if only a leaving time is shown, or when more than 12 hours behind their arriving time when an arriving time is shown.

Q. When a regular train loses both right and schedule, how may it then proceed?

A. By train order.

Q. If a train loses both right and schedule by becoming more than 12 hours late on its arriving time, may engine and equipment or any other engine and equipment be authorized by train order to assume the schedule provided it can get out within the 12 hour limit of the leaving time?

A. Yes.

Q. If both an arriving and leaving time is shown for a schedule at a station, and an operator has orders addressed to that number, when do the orders become void?

A. When schedule is more than 12 hours late on the leaving time.

Q. Unless some form of block signal is used, how far apart must trains be kept, moving in the same direction?

A. If both trains are carrying passengers, or if a train is following a train carrying passengers, they must be kept at least ten minutes apart; other trains five minutes apart under the Standard Rules and, if your rules require more clearance, comply with them.

Q. If no form of block signal is used, should an operator space trains moving in same direction according to the rules, using the train order signal for the purpose, and specify the time the following train may leave on the clearance card if rules require it?

A. Yes.

Q. When two or more sections are run has each section equal time-table authority?

A. Yes.

Q. Have all sections of a schedule equal train order authority?

A. No, not always.

Q. If there is no train register at a station and operator is notified by conductor that signals have been taken down for a following section which has not arrived, how should operator be governed?

A. Stop and notify all opposing trains that the section for which signals were displayed has not arrived.

Q. If the schedule becomes more than 12 hours late at your station, or the annulment of the following section into your station is received, would it then be necessary to notify opposing trains?

A. No.

Q. Does Rule 96 apply on double track?

A. No, but it applies at the end of double track when trains moving from single to double track take down signals before the following section arrives.

Q. If by special rule in time-table a train is authorized to register by ticket, should operator apply Rule 96 to such train if an opposing superior train took down signals at the register station before the following section arrives?

A. Yes.

Q. If the superior train registered signals taken down at a point not a register station and an opposing inferior train is authorized to register by ticket how should operator be governed?

A. Stop and notify them.

Q. Is an operator permitted to handle switches for train men?

A. No, not unless authorized by Superintendent.

Q. Are Dispatchers required to address orders to those who are to execute them, naming the place at which each is to receive his copy?

A. Yes.

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Q. Must a copy be supplied for each person addressed?

A. Yes.

Q. How must orders be numbered?

A. Consecutively each day, beginning at midnight.

Q. If two or more sets of Dispatchers are working on the same Division, should each set use a separate series of numbers?

A. Yes.

Q. Is it good practice to number track orders consecutively for a longer period of time, and why?

A. Yes, to prevent duplicate numbers.

Q. How must conductors and enginemen regard orders addressed and completed to an operator when delivered to them?

A. The same as if addressed to them.

Q. Must each train order be written in full in Dispatcher's order book and a record made of the names of all who sign it, showing the time and signals and from what offices the order was repeated, and the responses transmitted, also the Dispatcher's initials?

A. Yes.

Q. If Dispatcher will not permit an operator to repeat all of an order, but just that portion concerning the movement of the train addressed, should operator deliver it partly repeated?

A. No, he should hold the train until permitted to repeat it all.

Q. How should train orders transmitted by telegraph designate regular trains?

A. By their numbers as "No. 10" and sections by words as "Second 10". Extra trains by their engine numbers and direction as "Extra 75 East" or "West".

Q. How should train orders be transmitted by telephone?

A. The names of stations must be plainly pronounced, and then spelled letter by letter, thus Aurora A-u-r-o-r-a; all numerals must first be pronounced and then followed by spelling, thus, 1-0-5, o-n-e n-a-u-g-h-t f-i-v-e; the Dispatcher writing the order as he transmits it and underscoring it as it is being repeated. The letters duplicating numerals and names of stations must not be written in the book nor upon train orders. The duplication of figures in words, is permissible, if so authorized, when orders are sent either by telegraph or telephone.

Q. Should operator repeat train orders by telephone in the same manner as Dispatcher is required to send them?

A. Yes.

Q. Should operator copy orders sent by telegraph exactly as sent, letter for letter and word for word, and repeat just as they are written?

A. Yes.

Q. In transmitting a train order what procedure is necessary?

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A. The signal 31 or 19 must be given each office addressed, followed by the direction, the number of copies required if more or less than three, thus, "31 West Copy 5" or "19 East Copy 2".

Q. If only one form is in use, may the form number be omitted?

A. Yes.

Q. If not practicable to send an order simultaneously to all offices, to whom should the order be sent first?

A. To the superior train.

Q. In sending several addresses of an order, in what way should it be done?

A. The addresses must be sent in the order of superiority of trains, the one of greatest superiority being addressed first.

Q. When practicable should orders to meet or wait be sent to the operator at the meeting or waiting point?

A. Yes, unless within Block Signal limits and special instructions have been issued making it unnecessary.

Q. After receiving an order addressed to operator at the meeting or waiting point how should operator be governed?

A. Deliver copies to all trains effected by the order until all have arrived from one direction, then file the remaining copies unless such order is also addressed to a train, in which case it must be handled in the usual manner.

Note. When Form E, Example 4 is used this would seem impracticable.

Q. Should an order be sent to a train at the meeting point if it can be avoided?

A. No.

Q. If it can not be avoided what extra precaution should be taken, especially outside of block signal limits, on descending grades, non-stop for the train or view obscure?

A. Operator should, in addition to having stop displayed, go out in the direction from which the train he holds the order for is approaching and give it additional stop signals. Dispatcher should, if necessary, instruct operator to do so, but operator should not expect to be told, but do it if conditions require.

Q. When necessary to send an order to a train at the meeting point, what should be stated in the order?

A. "This order to \_\_\_\_\_ at \_\_\_\_\_."

Q. How should operators copy train orders?

A. In manifold during transmission.

Q. If the required number of copies is not made how should operator obtain additional copies, and what should be done before delivery?

A. Make additional copies from one of the copies previously made and repeat to Dispatcher from new copies each time additional copies are made. A copy of those made must be retained.

Q. Is an O. K. necessary to the repeat of a newly made copy?

A. Yes.

Q. Are operators required to repeat 31 form orders at once in the succession addressed (unless otherwise directed) and then write time repeated in place provided?

A. Yes.

Q. Are operators required to observe if others repeat correctly, and if not, what action should be taken?

A. Yes, and if not repeated exactly as sent break at once and notify Dispatcher.

Q. To whom should train orders be addressed?

A. To those who are to execute them.

Q. By whom should 31 orders be signed?

A. By those to whom they are addressed except engineman and, in some cases, the engineman must sign.

Q. In what cases should an engineman sign a 31 form order?

A. When running light without a conductor, when receiving orders at a point not a train order office or at a closed office, receipting for a new time-table, when an order is sent to a train at a point not a train order office or one that is closed in care of an engineman, when an order is addressed to engineman of a helper engine to run after cutting out when such engine is coupled in a train, and when a 31 form order is received for a train that has been cleared or the engine of which has passed the train order signal.

Q. When signatures to 31 orders are sent preceded by order number and followed by the train number, how should Dispatcher respond?

A. If he is ready to complete the order, respond "Complete" or "Com", the time and initials of the Superintendent or official designated to sign train orders.

Q. After receiving and writing the complete on an order, how should it be delivered?

A. Deliver a copy to each person addressed except engineman, and to the engineman if he is required to sign the order.

Q. By whom should engineman's copy be delivered?

A. Standard Rules leave this blank, but the duty is generally required of the conductor.

Q. In what way does the handling of the 19 form order differ from that of the 31 form order?

A. No signatures are required to the 19 form order and if it will not take the operator away from the immediate vicinity of his office he should deliver personally to the engineman.

Q. When a 19 form order restricting the superiority of a train is issued for it at the point where such superiority is restricted, how should it be handled?

A. The train should be brought to a stop before delivery is made.



**Q. If all orders for a train are on the 19 form, how should operator deliver them?**

**A.** If at an intermediate station on single track fold them inside the clearance card, if one is required, and deliver from the office side of the main track. On double track deliver from outside of tracks considering direction of train movement.

**Q. If operator holds both 19 and 31 form orders for a train, how should they be delivered?**

**A.** Obtain signatures and complete to 31 orders and deliver both 31 and 19 form orders to conductor.

**Q. Should an operator sign a conductor's name to a 31 form order, get complete and deliver in the same manner as a 19 order if instructed to do so?**

**A.** No.

**Q. Should an operator send a conductor's signature in advance of its receipt on the order or place the complete or any portion of the complete on an order before it is received?**

**A.** No.

**Q. Is it permissible to deliver orders to a brakeman or allow an engineman to sign a conductor's name to a 31 order?**

**A.** No, except when delivering the 19 form order as train passes. Engineman must not be permitted to sign conductor's name.

**Q. Is an operator required to place his signature on or send his signature to Dispatcher in handling 19 orders?**

**A.** No, only sign last name on order following complete and time.

**Q. If a 31 form order is addressed to C&E, Pilot and Operator, who is required to sign it?**

**A.** Conductor, Pilot and Operator.

**Q. Should an order be interlined, underlined, altered, scratched or erased in any manner?**

**A.** No, except the operator's copy may be underlined if the order is to be relayed.

**Q. In writing train orders should words and figures be connected by loops or lines or otherwise flourished?**

**A.** No.

**Q. Is it permissible to surround figures in train orders by circles, brackets or other characters?**

**A.** No.

**Q. In sending an order to a train at a point not a train order office, or one that is closed, in whose care may it be sent?**

**A.** Any reliable employe, but it is generally sent in care of either conductor or engineman, but such orders should not be addressed in care of No. \_\_\_\_\_, or C and E No. \_\_\_\_\_.

**Q. When 31 form order is used, how should it be handled?**

**A.** Complete will be given upon receipt of signature of person in whose care it is sent, and sufficient copies supplied for conductor and all enginemen of train addressed, and an additional copy upon which he shall take conductor's and engineman's signatures and deliver to first accessible operator, who

must transmit signatures to Dispatcher and place on file. The complete to person in whose care order is sent is sufficient for conductor and engineman addressed.

**Q. Should an order be completed to an inferior train before signature of conductor and engineman is received from the superior train, when the order is sent to and restricts the superior train at a point not a train order office or one that is closed.**

**A.** No.

**Q. If operator receives an order addressed, for example, to "C&E No. 2" and there are two or more sections of No. 2, how should order be delivered?**

**A.** To each section of No. 2.

**Q. If the first section of No. 2 is by, should operator accept an order addressed to No. 2?**

**A.** No, it must then be addressed to the sections.

**Q. When may an operator repeat or give the X response to a train order for a train which has been given a signal permitting it to proceed or the engine of which has passed his train order signal, or has been given a clearance where one is required?**

**A.** Not until the signatures of Conductor and Engineman have been obtained.

**Q. May signatures be taken on a 19 form order in this or any other case?**

**A.** No.

**Q. May Dispatcher authorize an operator to send the "X" response or repeat an order for a train that has been cleared or engine of which has passed the train order signal?**

**A.** No.

**Q. When is a train order in effect, or when does an order become a holding order for the train addressed?**

**A.** When it has been either repeated or X response sent, and before complete has been given.

**Q. Is a 19 order in effect after it has been repeated or X response sent, and before complete has been given the same as if it were a 31 form order?**

**A.** Yes.

**Q. Is a response to the X or repeat required from Dispatcher?**

**A.** No.

**Q. How should the order be treated after X'd or repeated?**

**A.** As a holding order but must not be otherwise acted upon until it is completed.

**Q. If line fails before order is X'd or repeated, how should it be treated?**

**A.** As if it had not been sent.

**Q. When and how should an order be X'd?**

**A.** When instructed by Dispatcher, and then operator should reply (first giving office signal and SD) "X Order No. \_\_\_\_\_ to C&E \_\_\_\_\_" with the initials of his name and office signal, writing initials and time in place provided on the blank. When telephone is used give station name.



- Q. If an order has been X'd when must it be repeated?  
 A. At the earliest possible moment and before delivery is made.
- Q. When may a train order be completed to an inferior train?  
 A. After it has been repeated or X response sent by the operator receiving it for the superior train.
- Q. How long are train orders in effect?  
 A. Until fulfilled, superseded or annulled.
- Q. How is an order superseded?  
 A. By using the words "instead of".
- Q. May a part of a train order be either superseded or annulled without effecting the remaining portion of the order?  
 A. Yes.
- Q. What becomes of all orders held by or issued for, or any part of an order relating to a regular train, when such train becomes more than twelve hours late, or is annulled (provided the orders apply only within the territory where annulled)?  
 A. They become void to that train and when held by an operator should be filed unless addressed to other trains.
- Q. If an operator holds an order addressed to trains annulling a schedule and the schedule annulled becomes 12 hours late at his station, how should he be governed?  
 A. File it.
- Q. With the exception of train orders issued for a regular train, and such regular train becomes more than 12 hours late or is annulled, or the annulment of a schedule that has become 12 hours late, may an order be filed without first being annulled by Dispatcher?  
 A. No.
- Q. If the time in a time order expires, may it then be filed by the operator if addressed to a train.  
 A. No, not unless annulled by Dispatcher.
- Q. Should an operator accept a number from Dispatcher and repeat an annulment of an order?  
 A. No, Dispatcher should send the order.
- Q. How should operator copy the order—across the face of order annulled or on a separate blank?  
 A. Copy on separate blank.
- Q. What notation should operator place on his copy of the order annulled?  
 A. "Annulled by Order No. \_\_\_\_\_", adding date if annulled on a later date than date order was issued.
- Q. If an operator copies the annulment of an order and train to whom it is addressed approaches before complete can be obtained, should the train be allowed to proceed?  
 A. No, not until the annulling order is completed.
- Q. If an order is addressed to two or more trains, may it be annulled to one of them without effecting the others?  
 A. Yes, by stating "Order No. \_\_\_\_\_ is annulled to \_\_\_\_\_".

- Q. If a conductor has signed a 31 order, but it has not been completed, may it be annulled to the operator?  
 A. Yes, so ruled by the A. R. A. However, to avoid any controversy owing to conductor having placed his signature on the order, it should be completed to the train and then annulled.
- Q. Should an order be addressed to "C&E All Concerned"?  
 A. No, it is too indefinite.
- Q. If a train is authorized by rule or train order to register by ticket, what should be given the operator, and how?  
 A. A register ticket, and it may be thrown off, if practicable.
- Q. Should an operator enter the contents of the register ticket on the register and then report the train from the register, or report from the ticket and then enter it on the register?  
 A. Always enter on the register first and then report from the register, and, if a regular train, state kind of signals displayed, if any; if not, say "no signals". It is more important to say "No signals" when none are registered than to say "green" when green is registered.
- Q. If register ticket is not properly filled out, or none is left, how should operator be governed?  
 A. Confer with the Dispatcher, get the necessary information, register the train properly and make a written report to the proper official.
- Q. At non-register stations should a record of trains be kept?  
 A. Yes.
- Q. How should an operator handle an order reading "Hold No. 10" or "Hold Westward Trains"?  
 A. Hold as directed and deliver copies to Conductor and Engineman of all trains held until an order is received addressed and completed to the operator annulling the hold order or stating "No. 10 may go", then deliver copies of the annulment or "may go" order to those to whom the hold order was delivered; also, deliver all other orders addressed to them, if any, and a clearance card with all order numbers thereon, if such is required.
- Q. Are operators required to make a transfer when relieving each other, and what must it contain?  
 A. Yes, it must contain a list of all unexpired orders and overdue trains, or a note of any trains in the yard that have been cleared.
- Q. Should an operator handle train orders without a transfer?  
 A. No, not when there is an operator to relieve.
- Q. If there is nothing to transfer, should a blank transfer be made?  
 A. Yes.

Q. If operators relieve each other for lunch hour, or for any period of time, no matter how short, should a transfer be made?

A. Yes.

Q. If two or more operators are on duty should one be assigned to train order work and continue to perform that duty until relieved by another and a transfer made?

A. Yes.

Q. When more than one operator is required for train order work should there be an assignment to certain wires and if, at any time during the day or night, it becomes necessary to double up the work, should the operator going off duty transfer his territory to the one on duty?

A. Yes.

Q. If later it becomes necessary to divide the work again, must a transfer be made of that portion of which operator is to be relieved?

A. Yes.

Q. In cases of this kind, are two transfer books necessary?

A. Yes.

Q. If an extra is created by Old Example 3, Form G, (extra scheduled by train order) does the extra become void when more than 12 hours late on the time specified in the order?

A. No, it is in effect until fulfilled or annulled.

Q. Are operators permitted to complete orders for Dispatcher in case circuit fails and unable to obtain complete?

A. No, not unless so instructed in advance by the Dispatcher in case of anticipated circuit failure.

### TRAIN ORDER SIGNAL.

(Rule 221-A).

Q. What is the normal position of a train order signal under Rule 221-A when an operator is on duty?

A. Stop—both semaphores horizontal and red light at night.

Q. When may an operator indicate proceed?

A. To permit a train to pass after getting orders or for which there are no orders.

Q. Is a train permitted to pass the signal when stop is indicated?

A. No.

Q. After indicating proceed as required when should signal be placed at STOP again?

A. As soon as rear of train has passed.

Q. When may signal be fastened at proceed?

A. Only when there is no operator on duty.

Q. When necessary to issue a clearance must the total number of orders delivered be designated on the clearance.

A. Yes.

### TRAIN ORDER SIGNAL.

(Rule 221-B).

Q. What is the normal position of train order signal under Rule 221-B when an operator is on duty?

A. Proceed—both semaphores at an angle to the horizontal and a green light at night.

Q. When must signal be placed at STOP?

A. When trains are to be stopped for train orders.

Q. After receiving the signal "31" or "19", followed by the direction, what must be done?

A. Display the stop signal in direction indicated and reply to Dispatcher "SD". This must be done before order is sent by Dispatcher.

Q. When may signal be restored to "Proceed", its normal position?

A. Not until all orders for trains in the direction governed by the signal have been delivered or annulled.

Q. How may a train proceed while stop is indicated?

A. By obtaining a clearance card (Form A).

Q. When a clearance is issued must the total number of orders delivered be designated thereon?

A. Yes.

### TRAIN ORDER SIGNAL AS USED ON MANY RAILROADS.

(Not Standard).

Q. What is the normal position of train order signal?

A. Stop—semaphores horizontal, red light at night.

Q. Is it necessary to furnish a clearance card with train orders, the numbers of all orders to be designated thereon?

A. Yes.

Q. If there are no 31 or 19 form orders, should it be so stated?

A. Yes.

Q. If there are orders must the numbers be placed on the clearance card and then the train addressed with the numbers of orders repeated to the Dispatcher and an O. K. with time and Superintendent's initials obtained and written thereon before delivery is made?

A. Yes.

Q. After a clearance has once been O. K'd. by the Dispatcher, may order numbers be added thereto?

A. No, the old clearance must be destroyed and a new one made, repeated and O. K'd. in regular manner.

Q. When may a train be given a proceed signal?

A. If there are no orders for it or any other train in the same direction, after engineman calls for the signal by four short sounds (or after giving station whistle, if rule permits) he may then place semaphore in proceed position.

Q. When should signal again be placed at stop?

- A. As soon as the markers are by the signal.
- Q. How is a closed office indicated?
- A. Both semaphores at proceed and, in addition, a green light at night.
- Q. When both semaphores are placed at proceed, how should approaching trains be governed?
- A. Pass the same as if there was no train order signal.
- Q. If signal is at stop when train arrives and it is desired to close office before train leaves the station how should it be done?
- A. Clear train with a clearance card.
- Q. Under either system must operator have proper appliances on hand ready for immediate use should the fixed signal fail?
- A. Yes.
- Q. If operating under normal STOP and the fixed signal fails, how should operator use the hand signals?
- A. Keep a red flag by day and red light by night displayed until ready to give a proceed signal, then remove the stop signal and display the proceed signal until the rear of train has passed, then again display stop.
- Q. If operating under normal PROCEED, how?
- A. Keep a proceed signal displayed until an order is to be received for a train, then remove the proceed signal and display STOP until orders have been delivered, then again display PROCEED.
- Q. Are operators permitted to use the authorized abbreviations in Rule 223 in a train order when not so sent by Dispatcher?
- A. No.
- Note: Use these questions and answers only where the use of the 19 form order is permitted in restricting superiority of trains and numbers of orders are required on clearance cards and same to be checked by Dispatchers.
- Q. If there are no orders for a train is it necessary to repeat clearance to Dispatcher and obtain O. K., time and Superintendent's initials to clearance before making delivery?
- A. No.
- Q. If there is one or more orders for a train how must operator be governed?
- A. Fill out the clearance form and include numbers of all orders for the train addressed thereon, then repeat train and order numbers to Dispatcher and obtain O. K. and time with Superintendent's initials, writing same on the clearance as sent.
- Q. If after a clearance has been O. K'd. by Dispatcher may other numbers be added to it?
- A. No, destroy clearance, make a new one and handle in the same manner as before.

- Q. If operator does not repeat numbers of all orders he has for the train to the Dispatcher, and Dispatcher fails to call his attention to it and gives the O. K., is he responsible?
- A. Yes equally responsible with the operator for non-delivery of the order.
- Q. If operator receives a 19 form order restricting a train at his station, how must delivery be made?
- A. Stop the train and then deliver the order.
- Q. If a train has been cleared or is beyond the signal and Dispatcher desires to give it another order, must he assume the responsibility of train leaving before operator reaches it?
- A. Yes.
- Q. If under conditions of preceding question it is a restricting order should the 19 form be used?
- A. No, the 31 form must be used.
- Q. In case the train has received one clearance is it proper to give it a second clearance with additional order?
- A. No, only in extreme cases. The first clearance should be taken up and a new clearance covering all orders delivered.
- Q. In issuing orders where Dispatcher must know positively that same have been received before completing to inferior train, must the 31 form be used if any doubt?
- A. Yes.
- Q. When necessary to restrict a train at a point not a train order office, or at one that is closed, may the 19 form order be used for the train to be restricted?
- A. No, the 31 form must be used.
- Q. When reducing a time order may the 19 form be used to inferior trains holding authority to move under such orders?
- A. No.
- Q. May the 19 form be used for taking receipt for new time-tables?
- A. No, the 31 form should be used.
- Q. When restricting a train that has been cleared or the engine of which has passed the train order signal, or when restricting a work extra that is within the territory where the order restricts may the 19 form be used?
- A. No, the 31 form must be used as signatures must be obtained.
- Q. If operator at D holds an order giving No. 2 right over No. 1 to D, does it restrict No. 1 at D, the same as if it were a meet?
- A. Yes.
- Q. If the right order is used and at the time No. 1 approaches D No. 2 is not yet due out of C for a time that may permit No. 1 to clear it at C, may operator hand the 19 order to No. 1 without stopping it?
- A. Yes.
- Q. Does a time order restrict at a station until the time has expired?
- A. Yes.

**Q.** Must operator keep a carbon copy of all clearance cards issued?

**A.** Yes.

**Q.** When coming on duty, no operator to relieve, or any time after office has been closed, what is operator's first duty where normal position of signal is STOP?

**A.** Place train order semaphores in stop position.

**Q.** When an operator holds an order for a train may he clear another train of the same direction with train order signal?

**A.** No, as he can not be sure it is not the train he has orders for. Dispatcher can not always be sure which train is ahead.

**Q.** If operator at D, Diagram 4, Plate 7, page 74, receives a restricting order for a work extra working between C and E, when may he send the X response or repeat the order?

**A.** Not until he receives signatures of conductor and engineman.

**Q.** If operator at D is positive the work extra is between C and D and the order restricts them only between D and E, when may he send the X response or repeat the order?

**A.** At once as he is then between the work extra and the restricted territory.

**Note:** If there is another line by which the work extra may move under flag or orders to opposite side without passing through Station D, then operator should not X or repeat until signatures of conductor and engineman are obtained.

**Q.** If an operator clears a train by displaying a proceed signal and again displays a STOP signal before engine passes, should he consider the train held?

**A.** No.

**Q.** If a time-table designates a train order office and train order semaphores are removed is that sufficient to close the office?

**A.** No, instructions closing the office should be issued.



Sept. 22  
Oct 27  
Nov 3  
Jan. 18  
Jan 25

D530.6  
Nichols  
Train op  
SEP 15 1937  
22 461  
OCT 2 1937  
Oct 9 1937  
OCT 20 1937  
Oct 27  
Nov 3  
JAN 1 1941  
181  
25

N51

Nichols

## Train operations

SEP 15 1931 *L. Warner* SEP 22 1931  
32 401 West 118 St. grad


OCT 2 1937 *FL Warrne*  
OCT 9 1937 401 W *OCT 11 18th.*

Oct 20 1937  
Oct 27  
Nov 3  
F.L. Name  
401 West 118th  
Wichita 4-57

JAN 1 1941  
18/ 25  
F.L. Warr  
401 West 118 St.

MSH 02447

NLH



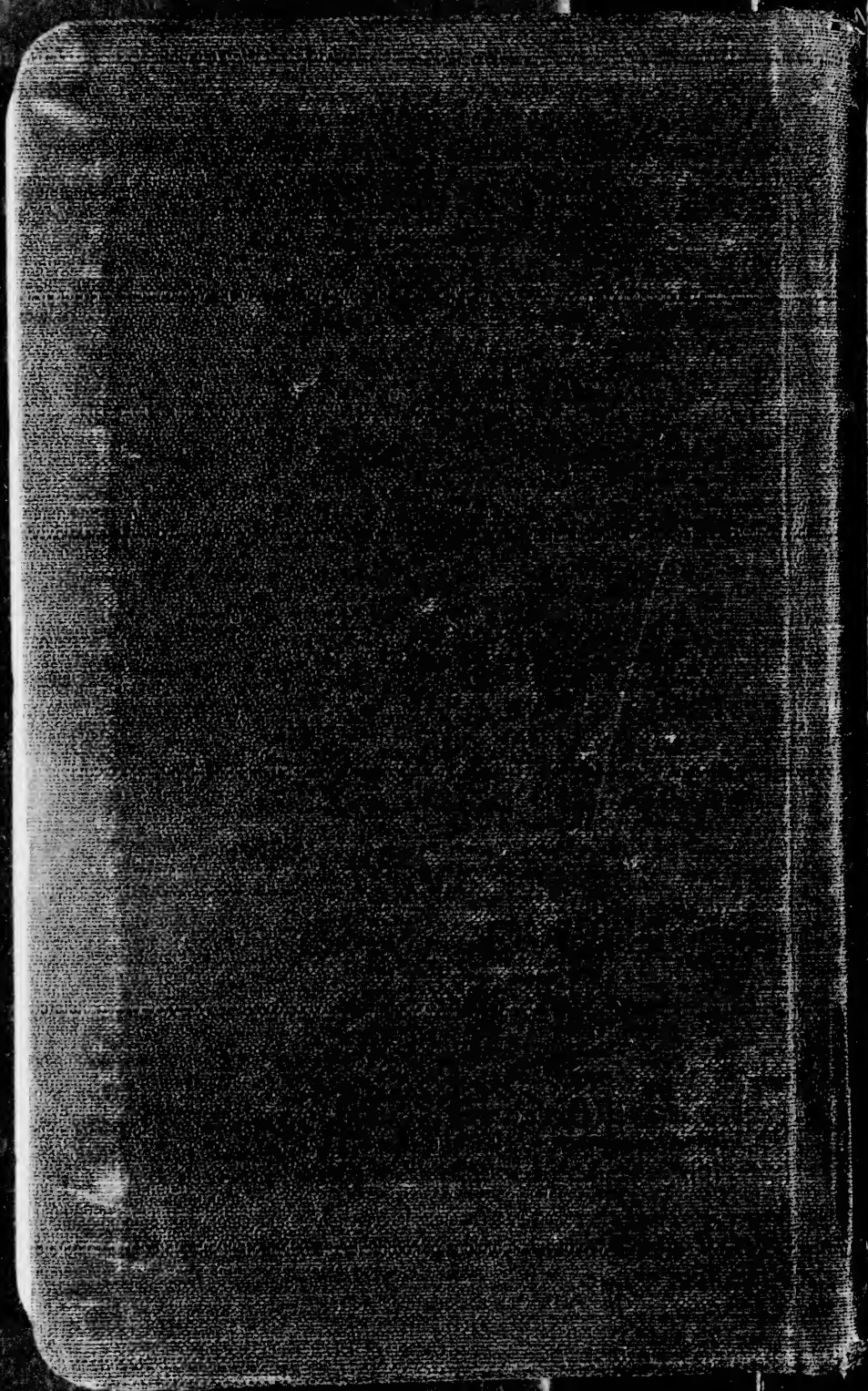
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